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THE
DUBLIN JOURNAL
OF
MEDICAL SCIENCE.

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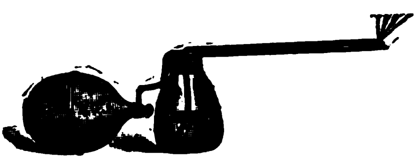

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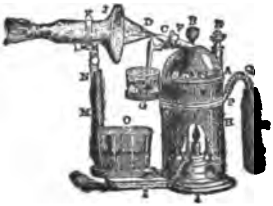

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THE DUBLIN JOURNAL
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PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*Recent Advances in the Ætiology of Diseases of the Skin, and their Bearing upon Treatment.*[a] By WALTER G. SMITH, M.D., Physician to Sir Patrick Dun's Hospital; King's Professor of Materia Medica, School of Physic, Trin. Coll. Dubl.

In the present paper I propose to collect and summarise the results of some recent investigations. I shall endeavour to show the light which these doctrines and inquiries have thrown, and are calculated still more in the future to shed upon the group of diseases of the skin.

No attempt at a complete survey will be made, nor would, indeed, be possible in the time, and a restricted field—that of cutaneous diseases—is purposely chosen, for the sake of illustration, although it will be obvious that the facts to be referred to have a much wider scope.

For example, it will be remembered that last session in the Section of Pathology Dr. Bewley read an instructive paper upon the Pathology of Empyema, in which he showed that empyema is always due to the entrance of pus-producing organisms into the pleural cavity, either directly from without, or through a diseased lung, or by the route of the blood and lymph-vessels.

Results such as these have been acquired by the patient labours of experts in modern microscopical research. While only the minority can be fellow-workers in this attractive field, the rich harvest which is being garnered can and ought to be eagerly seized upon by all practitioners who desire to keep pace with the rapid strides of knowledge.

---

[a] Read in the Section of Medicine of the Royal Academy of Medicine in Ireland Nov. 20th, 1891.

It is scarcely necessary to add that I do not at all wish to convey that dermatology is becoming a mere sub-section of bacteriology. Rather does the skin afford an epitome of general and special pathology, and the attempts to unravel its problems have been fruitful in elucidating pathological questions.

I shall allude more particularly to instances wherein our pathological conceptions have been simplified, and our views cleared, and hope to show that treatment has been rendered more rational and more successful.

If we glance at any of the current text-books upon Diseases of the Skin, we find a chapter or chapters devoted to the Vegetable Parasitic Diseases of the Skin. The affections usually described under this heading are some five or six in number.

Arranged in order of the discovery of their exciting cause, we start from the important discovery made in 1839 by Schönlein, who was the first to recognise and accurately describe the fungous character of the elements constituting a favus crust. To this succeeded the discovery by Gruby and Malmsten in 1843 of the fungus of ring-worm, and that of tinea versicolor by Eichstedt in 1846.

Notwithstanding the length of time these organisms have been known, and in spite of numerous investigations, their exact botanical affinities and mutual relationships have not yet been satisfactorily determined.

Even in the case of favus, whose clinical characters are so sharply defined, observers are not agreed as to whether we should acknowledge one only or several distinct forms of fungus.[a]

Many other problems await solution, some of them of old standing—viz., whether alopecia areata is a parasitic disease or not.

What a revolution is taking place in dermatology may be inferred from the fact that eleven years ago Kaposi, adverting to Hallier's mycological teaching, states that some of the investigations carried out in the direction indicated by him were so frivolous and resulted in such monstrosities that they excited the greatest mistrust of Hallier's results. "For," he scornfully adds, "there was no single disease, whether warts, eczema, psoriasis, pruritus cutaneus, or inflammation, erysipelas, &c., which would not be attributed to a fungus" (Hebra, "Diseases of the Skin," New Sydenham Soc., Vol. V., p. 129).

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[a] Cf. Pick und Král. Untersuchungen über den Favus. Monatsh. f. prakt. Dermat. XIII., p. 52.

Who, it may well be asked, would now deny that erysipelas and suppurative inflammations are due to parasitic organisms, to say nothing of the disputable ground presented by warts,[*] eczema, and psoriasis.

When we consider the exposed position, the extent of surface, and the innumerable creases, folds, and crevices in the human epidermis, it is little matter for surprise that it has been found to be the home of a great variety of micro-organisms. Thus, Unna, in an investigation of sixty pure cultures from a series of cases of seborrhœic eczema, discovered no less than fifty different Mucors, twenty different kinds of Penicillium, five Aspergilli, about a dozen forms belonging to the groups Oidium and Saccharomyces, besides a goodly number of partly known, partly unknown, cocci and bacilli.

Král succeeded in growing three pure cultures of mould fungi from "eczema marginatum," all of which possessed the common property of flourishing luxuriantly at the body temperature, while at the temperature of the room they grew but slowly and imperfectly (*Monatsh. f. prakt. Derm.*, 1890, p. 185).

In truth, there is an extensive Flora Dermatologica which vegetates upon the epidermis of man. The beginnings of our knowledge of it have been laid by Unna and his assistants, who have studied the appearances, macroscopic and microscopic, of these organisms, and their characters after cultivation in various media (*Monatsh. f. prakt. Dermat.*, 1888, VII., p. 817, *et seq.*).

Many of these fungi are harmless, some are merely saprophytic, and a few are real mischief-makers (*cf.* Die Färbung der Mikroorganismen im Horngewebe. Unna. *Monatsh. f. prakt. Derm.* XIII., p. 325).

As a matter of convenience, I have distributed the illustrations which I shall adduce under separate propositions :—

I. Some maladies hitherto ascribed to vague and unknown causes of internal origin are really traceable to infection, usually from without.

I shall upon this occasion dismiss with a nominal mention the case of lupus, whose specificity is generally acknowledged, and that of certain forms of purpura, which have been shown to be due to a fibrino-bacterial thrombosis (Tizzoni: Giovannini. de Guinard. *Monatsh. f. prakt. Derm.* X., p. 473; XI., p. 74).

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[*] Cf. Kuhnemann. Monatshefte f. prakt. Dermatol. VIII., IX.

Let us dwell shortly upon the examples of (*a*) erysipelas; (*b*) impetigo; (*c*) boils and carbuncles.

As to erysipelas, it may be regarded as proven that it is strictly caused by the intrusion of a streptococcus into the lymphatic channels of the skin or mucous membrane, and it is worth remarking that the contagious character of erysipelas was known in England long before it was recognised in Germany.

Erysipelas and lymphangitis are not convertible terms.

In connection with erysipelas, we are reminded of the interesting and important topic of the antagonism of micro-organisms, for erysipelas and vaccinia are examples of infective diseases, the artificial production of which has been suggested and used as a means of cure for other diseases—*i.e.*, lupus, and certain forms of tumour (Fehleisen, *Micro-parasites in Disease.* Selected Essays, New Syd. Soc., p. 272; and Watson Cheyne, Lectures on Suppuration, p. 83).

Now, erysipelas often starts from a source of suppuration, and may itself be complicated by or end in suppuration, and, again, suppurative affections of the skin of primary and secondary origin are phenomena familiar to us in every-day practice.

It is generally held as settled that *acute* suppuration is, as Ogston first showed, due to the action of micro-organisms;[a] but it is a difficult matter to determine whether erysipelas is an entity, a truly specific disease, or whether it does not represent a phase or mode of action of the pus-producing organisms. Watson Cheyne is inclined to uphold the specific character of the erysipelas germ, while Levy in a valuable paper (*Archiv. f. exper. Path. u. Pharm.* XXIX. Ueber die Mikro-organismen der Eiterung, p. 135), teaches that streptococcus pyogenes is at once an exciter of suppurative processes and of erysipelas. It is more than probable that there are several species of erysipelas due to different bacteria.

However this may be, it is a distinct advance in our knowledge to grasp the fact that the affections known as impetigo, boils, and carbuncles are invariably produced only under the influence of micro-organisms.[b] We are thereby enabled to get clearer views of their clinical history and progress, and our treatment is rendered less haphazard and more scientific.

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[a] Karlinski gives interesting statistics, based upon 200 cases of purulent inflammation, of the different forms of cocci and bacilli concerned—(*Monatsh. f. prakt. Derm.* X., p. 420).

[b] Cf. Bockhardt's classical paper—Ueber die Ätiologie u. die Therapie der Impetigo, des Furunkels, u. der Sykosis—(*Monatsh. f. prakt. Derm.*, 1887, p. 450).

The clinical differences in these affections can be explained by such considerations as these. Pus probably varies in virulence according to its origin, and pathogenic micro-organisms certainly vary in virulence according to the external conditions in which they find themselves. In a word, the character of the mischief done—*i.e.*, the type of the disease—depends not alone upon its direct cause, but also largely upon the mode of entrance and the seat of development of the organisms (Bockhardt: Garré).

Levy (*loc. cit.*) adduces evidence to show that the Bacterium coli commune may induce all possible forms of inflammation—viz., simple suppuration, inflammation of serous membranes, lymphangitis, and general blood-poisoning.

We are becoming more and more impressed with the conception, one of great importance, that the purely morphological study of bacteria is not the safe guide it was supposed to be in the dawn of bacteriology. A far more weighty point is the degree of virulence, coupled with investigations as to the conditions under which its virulence can be respectively augmented or attenuated.

We can easily see why pustular eruptions are common on the heads of children infected with pediculi. The reason is that pyogenic organisms often lurk beneath the nails or exist attached to hairs, and hence are readily inoculated by scratching into the little wounds inflicted by the pediculi.

It is an old observation, and one which Mr. Hutchinson has emphasised in his teaching (*i.e.*, his aphoristic definition of Impetigo contagiosa—viz., "common, contagious, curable"), that pus is contagious; but, it should be remembered that pus, apart from the organisms which it contains, does not exert a pyogenic action (Cheyne). So that, strictly speaking, "impetigo contagiosa" does not represent a specific entity, because all forms of impetigo are, from their pathogenesis, contagious.

Considering the very great frequency of wounds and breaches of surface, it may appear strange that inflammatory and suppurative diseases are not more commonly met with. To this it may be replied that pyogenic organisms are not so abundant in the air as might be supposed, they are rarely present in putrefying fluids, and, moreover, they act only under certain special conditions. We are, besides, led by experience to conclude that susceptibility to the action of pyogenic organisms is, in many individuals, but slight.

Virulence is probably altered by many slight and unexpected causes.

Is the dictum then true—"No bacteria, no pus"?

This is partly a verbal question, and turns upon our idea of what constitutes "true creamy pus" (Cheyne). Watson Cheyne leans to the doctrine of the essential connection between pus and bacteria ("Suppuration and Septic Diseases," 1889, p. 29); while Burdon Sanderson considers it proved that suppuration can be induced without the aid of microphytes (Croonian Lectures, *Brit. Med. Journ.*, Nov. 14, 1891, p. 1,033). V. Sehlen's observations in Unna's laboratory confirm this latter view (*Monatsh. f. prakt. Derm.*, XI., p. 327).

If organisms which are usually pyogenic—viz., Staphylococcus pyogenes, may in certain cases be purely phlogogenous (Levy, *loc. cit.*, p. 162)—why refuse to admit that non-microbic irritants may, under certain circumstances, excite suppurative inflammation? Can we determine when suppuration commences, and what test have we to decide when inflammatory exudation passes into purulent exudation? What is the "critical point" of suppuration?

Conversely it may fairly be asked, Does the presence of pyogenic organisms in an inflammatory effusion necessarily indicate that the effusion will become purulent? Levy (*Archiv. f. exp. Path. u. Pharm.* XXVII.) has shown that the presence of Staphylococcus pyogenes in a pleural effusion does not prove that it will become purulent.

At any rate, everyone admits that acute suppuration can be most surely brought about by micro-organisms.

Let us now for a moment stop to inquire in what ways these organisms gain access to the skin.

1. From without, through the epidermis. This is by far the most frequent mode. A wound or breach of surface offers an open door of entrance, but they may also enter through the uninjured epidermis, penetrating into the sweat ducts, hair follicles, and sebaceous gland openings. If the epidermis were an absolutely continuous horny sheet, devoid of glandular orifices, and remained uninjured, then we should undoubtedly less often see a pustule or boil on the skin. Yet it must be admitted that pus cocci may penetrate into the lymph-channels of the skin through the intact epidermis (Garré). Bockhardt's and Garré's disinterested experiments upon their own bodies are conclusive as to the pathogeny of whitlow, carbuncle, and boils—viz., that they are local

infective diseases. The well-known predilection of furuncles for certain localities—*e.g.*, neck, loins, and axilla—is explained by the closely-applied parts of the dress favouring a thorough inunction of infective germs present over these parts, the result of this inunction being rendered correspondingly certain by the presence of the sweat (Garré, "Microparasites in Disease." Selected Essays, New Syd. Soc., 1886). If the micrococci invade only the epidermis we have a superficial pustule—*i.e.* (*a*) impetigo [*]; if the intruders find their way deeper down the hair-follicles and gland-ducts, we have a more violent inflammation, with or without necrosis—*i.e.* (*b*) a boil, phlegmon, or suppurative folliculitis, and a congeries of furuncular points form (*c*) a carbuncle, which bears to a boil somewhat the same relation as that of a Peyer's patch to a solitary gland.

Ecthyma is scarcely worth retaining in nomenclature, for it is merely an aggravated form of impetigo, occurring chiefly on the lower limbs and on an unhealthy soil—*e.g.*, alcoholic or syphilitic.

2. The infection may occur from within outwards—*i.e.*, from the blood. This is true of only a small minority of cases. But it probably explains the occurrence of certain examples of mammary abscess, some of the instances of abscesses, boils, and other forms of local inflammation which are apt to occur, for example, in the wake of severe cases of continued fevers, epidemic influenza, &c. Pyogenic cocci have been found in the blood of patients suffering from various acute diseases, and by no means necessarily give rise to local troubles, for the production of which other concurrent factors are usually required. In eight cases of pyæmia and puerperal fever, and of which four died, Levy succeeded four times in demonstrating Staphylococcus albus in the blood of the living patients (Ueber die Mikro-organismen der Eiterung. *Archiv. f. exp. Path. u. Pharm.*, XXIX., 136).

II. What have been commonly described as different forms or varieties of disease are often really due to the co-operation of different causes.

Let me give one or two illustrations. *Acne*—Here we have two processes:—

(*a*) The closure of the follicle and the formation of a comedo.

(*b*) Suppuration within the follicle.

This arises either from the presence of micrococci which had been bottled up inside the plugged follicle or by subsequent infection. Hence, the two chief indications for local treatment are:—

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[*] Hence, impetigo is not a mere stage or phase of eczema.

(i.) To loosen and remove the horny plugs.

(ii.) To kill the micrococci which induce suppuration.

Scabies.—The eruption in this disease is described as consisting of papules, vesicles, and pustules. The pustules are really due to accidental secondary infection with pus cocci.

Syphilis.—Are pustular eruptions in a syphilitic patient the direct outcome of the syphilitic virus? Most of them are surely due to a "mixed infection;" and Leloir has since 1886 been in the habit of describing them in his clinique as purulent para-syphilitic complications.

Eczema.—The composite group of affections which we term eczema is being gradually disentangled.[*] I can now mention only two points. First, the occurrence of post-eczematous boils, which sometimes occur as a complication or sequela. They are rare in connection with other diseases of the skin. We explain these boils and abscesses by inoculation of the skin with pus-germs, the pre-existing eczema furnishing a suitable soil. Secondly, the eczema impetiginosum (not to be confounded with primary impetigo contagiosa), common on the face of children, is not, as some authors maintain, a variety of eczema. It is really a hybrid condition—*i.e.*, an eczema upon which an impetigo has been grafted, by inoculation with staphylococcus. Hence, as we see, the disease is far more frequent on uncovered than on covered parts, because it is propagated by scratching. In the course of appropriate treatment, further, it is comparatively easy to stop the suppuration—*i.e.*, cure the impetigo—but we then still find ourselves face to face with a chronic eczema, with its notorious resistance to treatment (Dubreuilh. *Annal. de Derm. et de Syphl.*, 1890).

Lupus and Scrofuloderma.—Although the latter term is scarcely susceptible of exact definition, it is convenient to retain it for the group of affections characterised by these marks—viz., indolent, dusky inflammation of the skin, readily undergoing suppuration, the tissue so spongy that it can be scraped away with the greatest facility, and leaving a thin white scar.

Such a condition of things is often conjoined with ordinary nodular lupus. In what relation to each other are we to view lupus and scrofuloderma? A plausible theory has been advanced by Unna, and Leistikow, who has examined the question bacteriologically, adopts the theory which, briefly, is this, that scrofuloderma is an affection caused by the symbiosis of Staphylococcus pyogenes aureus and Bacillus tuberculosis. Or, in other words, scrofuloderma represents a case of "mixed infection" by the tubercle bacillus and by the ordinary exciters of pus.[*]

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[*] For example, the term "eczema marginatum" embraces several distinct affections—viz. (*a*) erythrasma; (*b*) tinea circinata; (*c*) tinea versicolor; (*d*) pityriasis circinata (Vidal); (*e*) eczema, seborrhoicum; (*f*) forms of lichen circumscriptus (Vidal, Brocq.).—(*Monatsh. f. prakt. Derm.* XIII., *p.* 102.)

According to the predominance of one or other of these disturbers of nutrition, will the tissues exhibit a tubercular or a suppurative tendency.

? The tubercle virus thrives best in organs which are readily prone to hyperæmia. The skin, which in most situations is anæmic, does not offer a very suitable soil for the bacillus. It fixes itself generally on parts which are normally hyperæmic—viz., cheeks, nose, and ears. Around a spreading lupus we always find a zone of capillary congestion.

Should the tubercle bacillus fail to meet with a persistent hyperæmia in its neighbourhood, then its deleterious action may be arrested, and it becomes encapsuled in a dry, caseous mass. Hence the extraordinary chronicity and the intermittent progress of the lupous disease. Pus cocci, on the contrary, always induce active hyperæmia and extravasation, wherever they penetrate into normal skin-tissue. But if the pus cocci arrive as secondary elements upon a tuberculised soil, they find there a badly nourished tissue, a soil unsuited for their development, and which does not allow them to produce acute phlegmonous inflammation. Instead, therefore, we get a gummy gelatinous softening of the tissue, a degeneration midway between the dry caseation of tubercle and purulent softening. Such a tissue would be more easily and more completely removed by "scraping," and so, as clinical experience confirms, be less liable to relapse (Ueber Skrofuloderma; Dr. L. Leistikow.—*Monatsh. f. prakt. Derm.* XI., p. 438).

Leloir holds views identical with these.

III. Classification of diseases of the skin is rendered more accurate.

One example will suffice—viz., sycosis. This term was for a long time, and is still, far too often used loosely in a merely topographical sense—*i.e.*, for any obstinate pustular affection involving the hairy parts of the face.

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[*] Similarly, the gonococcus alone is unable to give rise to a suppurating bubo. When a suppurating bubo occurs as a complication of acute gonorrhœa it is always due to a "mixed infection" with pyogenic cocci, which are found in the pus from the bubo. The bubonic pus does not contain gonococcus.

The next step in advance was the distribution of the cases into two groups—viz., parasitic sycosis (tinea sycosis), and non-parasitic sycosis ("ordinary sycosis"!!) This subdivision is maintained in our most recent text-books, notwithstanding Bockhardt's conclusive observations were published in 1887.[a]

From the date of Bockhardt's paper we must deny the existence of a non-parasitic sycosis, and, in the present state of knowledge, the cases fall into three groups:—

(*a*) Coccogenous sycosis; due to staphylococcus, the so-called non-parasitic sycosis of authors.

(*b*) Hyphogenous sycosis; due to trichophyton, the so-called parasitic sycosis (ringworm of the beard) of authors. Exists as (*i*) superficial (*ii*) deep form.

(*c*) Bacillogenous sycosis; due to a bacillus named Bacillus sycosiferus fœtidus (Tommasoli. *Monatsh. f. prakt. Derm.* VIII., p. 483).

(*Cf.* Ueber ulerythema sycosiforme. Dr. Sack.—*Monatsh. f. prakt. Derm.* XIII., 133, and Disseminierte, parasitäre Perifolliculitis, *Ebenda.* XIII., 319).

IV. Since dermatology is at present in an active transitional state, the exposition of skin-diseases in text-books will have to be largely re-cast. Much greater attention must in future be paid to ætiology.

V. We can better see the reasons for much of our management of skin affections, and we recognise more clearly the importance of prophylactic measures.

Ringworm.—Everyone knows the ease with which ringworm can be cured on the smooth parts of the body, or those only provided with lanugo, and its obstinate resistance to treatment when situated on the scalp. Scharff's observations (*Monatsh. f. prakt. Derm.* X., 536), account for this. The human epidermis (horny layer) is a poor soil for the growth of trichophyton, which, in its turn, gives rise to only slight disturbances of nutrition in the skin, but even moderate inflammatory reaction is prejudicial to the life of the fungus, which consequently perishes, or is easily cured by parasiticide and irritant applications. Scharff found mycelium very scantily present, and only in the deeper layers of the horny stratum and in the lower part of the hair follicle; none in the prickle layer.

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[a] *Loc. cit.*

Upon the head, on the contrary, the fungus flourishes luxuriantly, and produces, as a rule, little inflammatory reaction. The artificially produced irritation and inflammation, so often used in the treatment of ringworm of the scalp, finds then its prototype and its justification in the moderate reaction which occurs upon the smooth parts of the skin.

(*Cf.* An interesting series of bacteriological experiments upon the relative value of certain drugs in the treatment of favus and ringworm, by Dr. Schwenger.—*Monatsh. f. prakt. Derm.* XI., 155.)

Erysipelas.—Accepting the parasitic nature of erysipelas as an undeniable fact, the position of those who, from clinical observation, have rejected the use of nitrate of silver and other local astringents in its treatment is amply justified. It is, I think, not more rational than the so-called abortive treatment of small-pox eruption; and, similarly, I must express my disbelief in the utility of the much-vaunted chalybeates internally.

Boils (Carbuncle) and Impetigo.—While the treatment of the superficial form of pustular dermatitis is often as satisfactory as it is simple, it is quite otherwise with the deeper grade of inflammation typified by a common boil. They are sometimes half welcomed—nay, if possible, encouraged by the laity under the lingering superstition that they afford an outlet for the evil spirits that torment the body, but ere long the patient will be ready to say:—

> "Die ich rief, die Geister
> Werd'ich nun nicht los."
> (Quoted by Garré.)

Now that the cause of boils is known to be parasitic infection, it will follow that, in the great majority of cases, they own an external origin, and the theory, still so dear to the minds of many, that they are entirely due to some vague constitutional cause ("impurity of the blood!") has received its quietus.

The indications for successful treatment fall naturally under four heads:—

1. To destroy by parasiticides the intruding cocci before they have induced necrosis of tissue.

2. When necrosis has occurred, to hasten as much as possible the expulsion of the necrotic plugs with their contained cocci.

3. To guard against the development of new boils through infection by means of cocci spreading from the older boils.

4. To place the organism in such a position as to render it as resistant as possible to invasion by micrococci.

As Veiel well points out (Ueber die Therapie der Furunkulose. *Monatsh. f. prakt. Derm.*, XI., 362), the first indication can seldom be fulfilled. For once the cocci have penetrated far enough to lead to visible swelling and formation of papule or vesicle, necrosis has, as a rule, begun, and the glandular ducts are clogged by exudation plugs, so that the external application of antiseptics frequently becomes futile. Abortion of a furuncle can sometimes be attained by first thoroughly cleansing the part and then applying Unna's carbolic-mercury plaster, or by injection with a 3 per cent. phenol solution.

For the second indication no method can, I think, approach in rapidity of cure the plan of thoroughly scooping out the necrotic core. Severe cases of pustular acne can be quickly and certainly cured only by following the same lines—*i.e.*, curetting or incising each pustule and carefully disinfecting its interior. This is very painful, and usually demands an anæsthetic, but its results cannot be equalled. It is both rational and successful. Where this method is not available for boils, then, with Veiel, I believe in the old-fashioned poultice, which, at will, may be prepared with a $\frac{1}{1000}$ solution of sublimate or a 4 per cent. solution of boric acid. At night the boil may be dressed with the carbolic-mercury plaster or with a boric acid paste (equal parts of vaseline and zinc oxide + 4 per cent. boric acid).

The third indication, which is an important one, is easily accomplished by thorough disinfection of the skin in the neighbourhood of the boils, especially over the seats of predilection, nape of neck, axilla, nates, &c.

In this mode a diabetic patient who, in nine months, had suffered from 160 boils was completely cured in seven weeks (Veiel). The greatest possible cleanliness must subsequently be observed as to habits, dress, and bedclothes, and the patient should keep his nails cut short and abstain from scratching.

Leloir gives a striking example which, perhaps, illustrates this point of contagiousness. A young man presented himself regularly every winter with a carbuncle or boil on his neck. At the first approach of cold he used to put on a great coat, the collar of which was dirty. This coat had belonged to his brother, who died of a carbuncle on the neck.

The fourth indication resolves itself into correcting any obvious derangement of health, and putting the patient under the best possible conditions of hygiene.

In the theory of causation we have to allow for factors other than the mere presence or accumulation of microbes in the blood and tissues—*e.g.*, depression of vitality, general or local, the existence of local inflammation, the influence of cold, injury, and individual predisposition; and, in regard to treatment, we must not overlook the influence of the state of the blood—witness, diabetes and albuminuria—and the possible modifications of the soil that may be brought about by the state of the digestive organs, diet, and internal medicines (*cf.* Watson Cheyne, *loc cit.*, p. 68); but upon these points it will, I imagine, be conceded by all that our knowledge is very defective.

One drug only may be mentioned.

I have no faith in the reputed virtues of calcium sulphide, in the prophylaxis or treatment of furunculosis, acne, and suppurating glands, and would place it side by side with that ludicrous specimen of therapeutic empiricism—viz., the treatment of amenorrhœa by pills of potassium permanganate.

ART. II.—*Acute Double Pneumonia successfully treated by Bleeding and Inhalation of Oxygen.*[a] By GEORGE FOY, F.R.C.S.I.; Surgeon to the Whitworth Hospital, Drumcondra.

THE case I bring under notice is that of a man, twenty-four years of age, who was admitted into the Whitworth Hospital, Drumcondra, on the 6th of June, 1891, suffering from pneumonia.

The disease extended over the whole of the left lung and the posterior lobe of the right.

When seen the temperature was found to be 104·6°, the pulse 112, and the respirations 36. A quinine and acid mixture was prescribed, and some pounded ice; this latter he took greedily and enjoyed greatly.

On the morning of the 9th of June he was so ill that death seemed impending; his face was almost purple, and his heart was acting slowly and laboriously, so that its stoppage seemed near at hand. Something had to be promptly done to relieve venous congestion, and I breathed the median cephalic vein and let blood to sixteen ounces. Immediately on the vein being cut a jet of ink-black blood shot some six feet off, and when the stream was caught in a vessel and kept for days it retained its dark colour, and neither buffed nor cupped. Before the bleeding was stopped the patient expressed the greatest relief, and his face lost its dusky hue; the pulse became soft and compressible, and the patient fell into a sound sleep, which lasted for six hours.

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[a] Read in the Section of Medicine of the Royal Academy of Medicine in Ireland, December 18, 1891.

Such good results were very satisfactory, but they were not permanent; in two days all the good effects were gone, and the old symptoms of venous congestion returned, and the disease, now in its eighth day, was pursuing an unfavourable course. Ammonia was prescribed, and a plentiful allowance of Valentine's meat juice ordered. Towards evening of this day—his fifth in hospital—respirations were 64 in the minute, and he was unable to hawk up the sputum; the temperature had fallen to 103°, but I did not think the fall of temperature betokened other than danger.

He commenced to wander in his mind and pick at the bedclothes. The greater part of his trouble was, I concluded, due to interference with the oxygenation of his blood, and as three-fourths of his respiratory space was functionally useless, I saw no way of oxidising his blood other than by increasing the amount in the air he breathed. By the aid of Mr. Turner, of Messrs. Fannin, of this city, I got a suitable apparatus, and on the evening of the 11th the patient commenced the inhalation of oxygen gas, which continued from 7 p.m. to 7 15 p.m. Gradually all the lividity of the face disappeared, and consciousness returned. On the inhalation being discontinued he slept for an hour.

Although the oxygen gas was driven directly into the mouthpiece, which was placed between the patient's molar teeth, no excitement but quiet followed its administration. At 10 30 p.m. the inhalation was repeated, and again during the night. For four days oxygen was administered every three hours for 15 minutes at a time.

On the morning of the 12th, at 10 a.m., the temperature was 100·8°, respirations 40, and the pulse 106. He expelled the sputum without difficulty, and was able to answer questions, but not to make any long statement. Oxygen was continued until all the more urgent symptoms disappeared; 33 feet in all having been given. Resolution set in and proceeded but slowly, and it was not until the 24th of August that the patient was discharged.

During convalescence the patient told me that on the night of the 2nd of June he travelled from Liverpool to Dublin on the deck of a cattle boat. He was thinly clad, and when the vessel was about half-way he got a severe shivering fit, and on reaching Dublin he went straight to his lodgings and got into bed; a warm jar was placed to his feet, extra clothes put on the bed, and a fire lit in the room, nevertheless he felt "stone cold," and shivered in bed. Warm drinks were given to him, and he got rid of the shivers, but got a violent headache, and during the night his landlady declared he was delirious. He was better the following day, but became again delirious at night, and remembers nothing more until he found himself in hospital.

My object in bringing the case forward is to call attention to two old-fashioned methods of treatment—bleeding and inhalation of oxygen.

Perhaps no therapeutic remedy ever had so much talent given to the investigation of its action as oxygen. Leonardo da Vinci, in his treatise on "Air and Flame," published about 1480, describes the necessity for the gas and tells of its anti-putrescent power. Mayow, 200 years later, performed his well-known experiment on a mouse with his "nitro-ærial" spirit, stating "that the igno-ærial particles absorbed in respiration are designed to change venous into arterial blood." His experiments were, in 1774, repeated by Lavoisier and by his pupil, Beddoes, the father of "Pneumatic Medicine." Priestley also experimented with his dephlogisticated air, and was so delighted with the results that he entertained the idea of purifying public assembly rooms by means of his newly-discovered gas. Fontana and that able physiologist, the Abbé Spallanzani, all became interested in the therapeutic possibilities of "nitro-ærial" or dephlogisticated gas. Ingen-Houzen, in 1782, found that after the inhalation of oxygen his sleep was sweeter and more refreshing than usual. Poulle, in 1785, laid down certain directions for its use, and describes the conditions calling for the use of the "Vital Air," in which treatise, which was published in Latin at Montpellier, he recommends the inhalation of the gas to "those asthmatics whose condition is not caused by excess of irritability;" and further, "it is the grand resource in restoring to life asphyxiated persons. Finally, it will prolong the last moments of the aged by rekindling in them the fire of life about to be extinguished." In a prize essay submitted to the Medical Society of Paris, in the Year of Liberty, on the therapeutic value of "Vital Air," he records the benefit a lady of thirty-one years of age, suffering from consumption, derived from its use.

Time does not allow of a chronological statement of the many medicinal uses to which oxygen gas was applied; but I may mention that Dumas, in 1792, declared that its inhalation in phthisis was baneful, and performed some experiments on dogs which appear to support his views. "I think I can set forth," said he, "founded on experiments, taht the continued use of such an air would start in the lungs that degree of lively irritation which sometimes leads to a tuberculous or ulcerous state, of which that disease is the necessary consequence." We should not, however, forget that Dumas in his experiments used oxygen obtained from oxide of mercury, the impurity and danger of which was pointed out by Priestley. Beddoes adopted the views of Dumas on the action of oxygen in phthisis, and he treated the disease with sub-oxygenated air, and he supported his theory by the statement that pregnancy arrested phthisis; and he asserted that the blood of pregnant women is deficient in oxygen. Reasoning from these grounds, Beddoes, in his pneumatic hospital at Clifton, confined phthisical patients to rooms in which by charging the chamber with hydrogen gas he produced an atmosphere deficient in oxygen. The Hotwells Hospital became famous for its treatment of palsy, epilepsy, asthma, chlorosis, hysteria, typhus, dyspepsia, and even leprosy, by the pneumatic process.

The staff was enthusiastic in praise of the method, and their labours were apportioned thus:—Mr. Watts attended to the apparatus; Mr. Davy prepared the factitious airs; and Dr. Beddoes took charge of the patients. The patients were directed to take "the point of the faucet between the lips, inhaling from the bag through the mouth, and to expel the air from the lungs through the nostrils, which operation most patients readily acquire a habit of performing with ease." The reputation of factitious airs in almost every form of disease was heightened by the publication by Dr. Beddoes of letters from Drs. Thornton, Cross, Barr, Carmichael, Pearson, and others, all lauding the new remedy; and in 1795 Mr. James Watt published a tract on the subject.

The first use of oxygen gas in this country of which I can find mention is that of Dr. R. Reid, who read a paper before the Association of the Fellows and Licentiates of the King and Queen's College of Physicians in Ireland on the 7th of July, 1817, entitled "The Use of Oxigen Gas in Angina Pectoris," which appears in the first volume of the Transactions of the Association.

Gradually the remedy fell into disfavour; probably the impurities that were present in all specimens of the gas prior to its being prepared from atmospheric air had much to do with its being laid aside. Within the last few years, however, the gas is coming to be largely used as a therapeutic agent of undoubted value; and since MM. Brin have succeeded in producing a perfectly pure oxygen the remedy can be easily tested and its merits decided. Cobell, in 1874, published a series of interesting and valuable articles on oxygen as a remedy in disease, in the *Virginia Medical Monthly*. And Dr. Goolden, of St. Thomas's Hospital (*Lancet*, Oct. 25th, 1879), found that oxygen gas promoted the healing of a sloughing ulcer of the throat. Dr. Francisco Valenzuela, of Madrid, in a paper before the Academia Médico-Quirurgica, in May, 1887, stated, as the result of a number of experiments made by him on rabbits to determine the effects of oxygen of high tension on the animal organisation, that he found it invariably to lower pyrexial temperature.

The Council of Municipal Hygiene of Paris, in June, 1888, directed Dr. Voisin to draw up a code of instructions for the administration of oxygen gas to the asphyxiated. Not long since the *Medical Press and Circular* reported the successful administration of the gas to a man who was asphyxiated from carburetted hydrogen gas.

In my book on Anæsthetics, I have recommended the gas as a remedy in anæsthetic narcosis. The therapeutic use of the gas is being tried in every country and for the great majority of diseases; but its value in pneumonia seems not to have attracted much attention, as may be seen by consulting Neale's Digest. Dr. John Chambers has, in the *Lancet*, reported favourably of its use in a severe case of pneumonia—indeed he ascribes the patient's recovery to its use; and his is the only British case I can find a report of.

Abroad it has been generally used for pulmonary diseases. Amongst the warmest advocates for its use are Wallian, of New York, whose numerous papers on the subject are summarised in Sajous' Universal Medical Annuals for 1888, 1889, 1890, and 1891, and Dr. W. G. Thompson, whose paper is noticed in Cassell's Year Book for 1890, and in Sajous' great work.

No matter what theory we may accept of the pathology of pneumonia, I think we cannot go far astray in employing Nature's antiseptic—an innoxious agent, and the one of all others most suited for the aeration of the blood and the oxidising of the broken-down tissues, and so facilitating their elimination by the kidneys. And not the least of its benefits is that of giving sleep to the worn-out patient—natural, refreshing sleep.

Art. III.—*Diseases of the Fallopian Tubes and their Treatment.*[a] By Thomas More Madden, M.D., F.R.C.S. Ed.; Obstetric Physician and Gynæcologist, Mater Misericordiæ Hospital, Dublin.

The differential diagnosis and successful or radical treatment of Fallopian tube diseases have only become obtainable within a recent period; and for that advance we are largely indebted to the teaching and practice of Mr. Lawson Tait and some other leaders of the modern school of abdominal surgery. Nevertheless, it may not be superfluous to remind you of the somewhat generally ignored fact that the disorders of the uterine appendages were by no means unfamiliar to many of the older writers, by whom, and more especially by Astruc,[a] of Paris, in 1761, and by Kruger,[b] of Gottingen, in 1782, their pathology was fully discussed; whilst by others very remarkable instances of what we now term pyo-salpinx, and hydro-salpinx, as well as other tubal troubles, have been narrated. Thus Portal[c] quotes, *inter alia*, a case from De Haen of "abscess in the left Fallopian tube which contained eighteen pints of pus;" and another from Munieks of "an enormous Fallopian cystic tumour, the contents of which were estimated at upwards of a hundred gallons"! He also cites from Harden the instance of "a woman in one of whose Fallopian tubes was found encysted a hundred and forty pounds of an aqueous fluid"! These or other cases of Fallopian disease were also referred to by Bailey,[d] Hooper,[e] and other writers of the first two decades of this century, and above all, a little later, by Dr. Davis,[f] by whom the symptoms and pathology of diseases of the oviducts as then understood were distinctly described in 1835. From that time may be dated the general recognition of the fact that the Fallopian tubes, being so intimately connected as they are structurally and functionally with the uterus, must necessarily be therefore liable to inflammatory diseases similar to those which affect that organ, however modified these may be in their symptoms and consequence by the special organisation and relations of the oviducts.

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[a] Astruc. Traité des Maladies des Femmes. Paris. 1761.

[b] Kruger. Pathologia Ovariorum Muliebrum. Gott. 1782.

[c] Portal. Cours de Anatomie Médicale. Tome V., p. 540.

[d] Bailey. Diseases of the Uterus, &c. P. 504.

[e] Hooper. Morbid Anatomy of the Human Uterus. P. 3.

[f] Davis. Obstetric Medicine and Diseases of Womb. Vol. II., p. 760. 1835.

The diseases which may be thus transmitted to the Fallopian tube not only from its uterine orifice but also through its free peritoneal extremity, or which may originate within its structure, are, firstly, inflammation, or salpingitis, and its consequences—viz., pyo- and hydro-salpinx—of which probably the most common causes are gonorrhœal infection and puerperal sepsis. Besides these the oviduct may, moreover, be the seat of encysted, fibromuscular, and malignant tumours.

Acute Salpingitis.—Acute inflammation of the Fallopian tubes may be here very briefly disposed of, inasmuch as salpingitis is seldom brought under gynæcological notice until the disease has reached the chronic stage. It is most frequently observed attending the puerperal state as a complication or consequence of septicæmia, when its occurrence is indicated by deep-seated, throbbing pain, extending from the iliac region into the groins and thighs, together with local tumefaction and tenderness, recognisable by conjoint recto-abdominal or bimanual examination over the course of the broad ligaments, in which the tortuous outlines of the hyperæmic and enlarged oviducts may be thus detected. The most common result of acute salpingitis is the chronic form of the disease. It may, however, also terminate in resolution or cure, as well as in the occlusion or obliteration of the ducts in any part of their course by the cohesion of their walls from plastic inflammatory exudations. As to the treatment of such cases, I know of nothing very reliable that can be recommended beyond allaying pain by opiates and administering quinine in combination with iodide of potassium or bichloride of mercury. Hot water vaginal, and rectal, irrigation and external stuping are obviously indicated, and are most likely to prove successful in acute catarrhal salpingitis, whilst it is difficult to see what possible benefit can be produced by counter-irritation by blisters or strong mercurial ointment over the inguinal region, which though still occasionally employed in such cases, are more likely to add to the discomfort of the patient than to cure the disease.

Chronic Salpingitis may affect either one or both tubes; more generally both are implicated, although in different degrees. Its extrinsic causes may be either gonorrhœal, puerperal, or catarrhal, whilst occasionally it may arise from local causes, such as tubercular and cancerous deposits in the tubes. Moreover, as might be expected, salpingitis and its consequences are more frequently met with during the earlier period of marital life, and in those in whom the utero-ovarian or sexual functions have been most exercised, than in patients more advanced in years and of non-erotic temperament. Thus Dr. Bland Sutton, who in his pathological investigations has had an extensive opportunity of examining the bodies of a large number of women of ill-fame, in most of these instances discovered evidences of hyo- or pyo-salpinx, or in some cases found one or both Fallopian tubes represented by an impervious cord and the ovaries atrophied and unrecognisable. This induces him to believe that the frequency of tubal disease between the age of twenty and thirty-five years and its relative rarity after the fortieth year is to be accounted for by the fact that, if the individual survive the dangers incident to an inflamed and distended tube, the diseased parts atrophy.

Symptoms of Chronic Salpingitis.—The general symptoms of chronic salpingitis, before the disease has eventuated in pyo- or hydro-salpinx, are scarcely distinguishable from those of the generally co-existing oöphoritis, and, later on, its effects and evidences are symptomatically almost identical with those of pelvic cellulitis or perimetritis, and in former days were commonly confounded with that disease. Of these symptoms of chronic tubal disease the most important are the recurrence of otherwise unaccounted for, and generally unrelievable by ordinary treatment, attacks of menorrhagia attended with dysmenorrhœa, or impeded through protracted or excessive menstruation. In such cases the patient further complains of a characteristic deep-seated, intra-pelvic pain which—in some instances from the first, and in almost all cases during the progress of the disease—sooner or later becomes acute or lancinating, shooting out into the sacral and inguinal regions, and extending down the thighs. At the same time may be also noted evidences of constitutional febrile disturbance and pyogenic rigors, and in some cases intra-menstrual hæmorrhages or aqueous discharges from the uterus, together with local tumefaction and tenderness in the course of the oviduct discoverable on examination per rectum.

The Pathology of Pyo- and Hydro-Salpinx has recently been fully investigated by a distinguished pathologist, Dr. Bland Sutton, and I cannot do better in this connection than place before you the following abstract of his observations on this subject, which may be found *in extenso* in the *Lancet* of December 6, last year:—

" *Pyo-Salpinx.*—In severe cases of salpingitis after occlusion of the abdominal ostium, accompanied, as is usual, with stricture of the uterine end of the tube," the pus, says Dr. Bland Sutton, "is as securely locked up in the tube as it would be in a deep-seated abscess, and it follows the course of an abscess. The walls of the tube, stretched by the accumulating pus, gradually thin, and the inflamed tube becomes adherent to surrounding structures—ovary, uterus, rectum, intestine or broad ligament. The wall of the tube continues to thin until, on some slight exertion, it bursts. If the pus be discharged into the peritoneal cavity, it establishes rapidly fatal infective peritonitis. Right pyo-salpinx is very prone to open into the rectum. When a pyo-salpinx lies in contact with bowel, the pus it contains becomes abominably fœtid, due to osmosis of the intestinal gases. The relation of pyo-salpinx to the rectum must be studied in connection with tubo-ovarian abscess. The first effect of salpingitis upon the ovary is to cause thickening of its capsule, and if lymph is effused upon its surface this may organise and extensive perimetritic adhesions result. The effects of this thickening of the capsule are twofold. At first it prevents the rupture of ripe ovarian follicles, and the tension gives rise to considerable disturbance and causes pain; and as the enlarged follicles cannot discharge their contents, it naturally follows that on section an ovary which has long been the seat of peri-oöphoritis will be found largely converted into cystic spaces, and two or more may become confluent and form a cyst the size of a walnut. As such a cyst enlarges and makes its way by absorption to the surface, it not infrequently comes into relation with and adheres to the dilated pus-containing ampulla of the corresponding tube, which has been brought in contact with it through the restraining influence of the tubo-ovarian ligament. Not infrequently absorption takes place, and the dilated ampulla of the tube will communicate with an enlarged follicle or cyst in the ovary, and thus give rise to a tubo-ovarian abscess, which may be discharged by way of the rectum at irregular intervals."

When the infective qualities of pus are not great a pyo-salpinx gives rise to few symptoms. It is this form of pyo-salpinx that, as Dr. Sutton believes, becoming gradually dilated with fluid, is eventually converted into a hydrosalpinx, which, as a rule, may be regarded as merely a late stage of pyo-salpinx.

Many milder attacks, however, may be described as "catarrh of the tube," and like a nasal or gastric catarrh subside and leave no trace. If the inflammation is sufficiently intense to seal the ostium permanent damage results, and if, as is so commonly the case, both tubes are affected, they remain throughout life functionless, and often a source of grave danger. In cases of salpingitis sufficiently severe to occlude the ostium the tube is, after the subsidence of the inflammation, in the condition of a blocked ureter; there is no escape for the fluid which is excreted by the glands in its walls, or for the fluid which passively exudes into its cavity. It consequently forms a cyst by retention. The fluid is either colourless or greenish owing to the presence of cholesterin.

In some instances the fluid, as before stated, may escape at irregular intervals through the uterus, constituting what has been described as "hydrops tubæ profluosis," and which is accounted for by Dr. Sutton as resulting from the occurrence of Fallopian fistula in such cases. In other instances, again, the exudation may take place through the abdominal ostium of the tube, possibly giving rise to fatal peritonitis, or in non-septic cases to "hydroperitoneum," which has been defined by Mr. Alban Doran as a collection of fluid in the peritoneal cavity that cannot be referred to any tangible organic disease, except chronic salpingitis of a mild type with an unobstructed tube.

Before referring to the treatment of these conditions, I shall in the first place briefly recapitulate the excellent notes taken by my clinical resident, Mr. Whyte, of a case of chronic salpingitis, which may serve to exemplify the ordinary course and results of that disease:—

CASE.—A. O'N., aged twenty-four, unmarried, an anæmic-looking draper's assistant, admitted October 17th, suffering from menorrhagia for two years previously. The changes, she stated, lasted from six to eight days, and were accompanied by much suffering. She also complained of almost continual pain in left groin and backache, together with a bearing-down sensation.

On vaginal examination the position of the uterus proved normal, and nothing beyond some slight endo-cervicitis being apparent except an unusual flattening of the roof of the vaginal posterior *cul-de-sac.* An examination by the rectum was made, on which distinct fulness and fluctuation was discovered in Fallopian tube, which was much enlarged. The aspirator was employed, and a long needle was passed through vaginal *cul-de-sac* and guided by finger *in situ* to most prominent part of tumefaction, at which it was introduced, and on turning the tap about six ounces of turbid puro-serous fluid was evacuated. No subsequent dressing was employed; the vagina and uterus both daily irrigated with hot water. She was put on iodide of potassium and bark mixture. Rapidly convalesced, and was discharged on December 9th.

Treatment.—In the treatment of chronic salpingitis and the resulting pyo- or hydro-salpinx, it appears to be not unfrequently lost sight of, that in these, as in all other cases, the gynæcologist should set before him not only the removal of disease, but also the restoration of the functional and structural integrity of the affected organ, as far as these objects can possibly be combined and accomplished, and that only where the latter is impracticable, should he be content with the former. With this view several methods of dealing with the cases now under consideration have been suggested—viz., firstly, the removal of the contents, whether purulent or serous, of the distended tube by aspiration, as recommended by Dr. Routh, and some years ago by myself in papers read before meetings of the Royal Academy of Medicine in Ireland, the Brighton meeting of the British Medical Association, as well as at the Washington meeting of the International Medical Congress, in which I also discussed the expediency and showed the possibility of catherisation of the Fallopian tubes in certain exceptional instances. Secondly, by free incision per vaginam, and subsequent washing out of the emptied tubes, as advocated by Dr. Sinclair. Thirdly, curetting the endometrium around the uterine ostium of the tube, and Emmet's operation. Fourthly, employment of electricity by the method of Apostoli; and, fifthly, by what may be termed conservative laparotomy—*i.e.*, abdominal section with the view either of aspiration of the distended ducts, or, as advocated by Mr. Alban Doran in some instances, for the purpose of breaking down adhesions and "freeing the diseased appendages." Sixthly, may be here mentioned the resection of the tube by salpingotomy or Skutsche's operation. Seventhly and lastly, in this connection is massage as employed by Brandt in these cases

I shall not here waste time by referring in extent to any of these procedures, save those that I have myself proved the practical utility of. This is not the case with regard to salpingotomy, concerning which, as well as other "fancy operations" that may more safely be demonstrated on a lecturer's diagrams than in a patient's body, I would re-echo Dr. Goodell's criticism—"The diseased parts cannot be handled in abdominal section without great risk. The tube is often tensely distended, and adhesion to neighbouring structures are usually intimate. Hence the tube may carefully be ruptured, intestines torn, and circumscribed collections of pus diffused." As to massage, even if harmless, it would be objectionable for the general reasons I have mentioned when referring to this subject in a previous lecture. But in cases such as those under consideration, even that negative merit can hardly, I think, be attached to a procedure such as that by which, according to the writer just cited, one of its advocates—viz., Brandt—is credited with venturing to attempt the emptying of a distended tube into the uterus by "rolling it gently between the fingers of both hands," a manœuvre which, it is admitted, often causes "an escape of secretion into the peritoneal cavity, which readily gives rise to symptoms of peritonitis!"

Turning from these fond fancies of transcendental scientists or enthusiastic fadists to the sober realities of practical gynæcology, we may now consider the rational treatment of pyo- and hydro-salpinx, in regard to which there appears to me no reason to depart from the traditionally recognised first principles of surgery, by an indiscriminate resort, in the first instance at least, to such heroic operative measures as the complete extirpation of the uterine appendages. If the mammary gland, for example, becomes the seat of a purulent collection, or if, as Sir Spencer Wells suggests, the tumica vaginalis testis is the location of a hydrocele, would it not be more advisable to open the abscess or to tap the hydrocele than to amputate the breast or to remove the affected testicle? And must we then necessarily adopt an entirely different course as a matter of general practice in dealing with analogous conditions in other no less important organs?

Acting on these principles, therefore, for several years past, I have, in the first instance at least, treated a considerable number of cases of pyo- and hydro-salpinx by aspiration and other conservative measures. The successful results thus obtainable in many, though by no means in all, instances of this kind have been proved in my wards in the Mater Misericordiæ Hospital. The majority of cases of this kind were there treated by that method, to which I have elsewhere referred, before its advantages were recognised. This treatment, even if not as certain in its radical curative results as salpingotomy, is certainly quite as successful in that class of cases to which its employment should be restricted, and at least contrasts favourably as far as facility of performance and safety from danger with the latter operation which in other cases or after its failure may become no less expedient. Hence I shall venture for an instant to dwell on the details of the less serious method, which, as I believe, will in not a few instances be found to afford satisfactory results whenever tubal collections are accessible per vaginam. In the first place, to permit the necessary manipulation, the patient should be put under some anæsthetic and placed in the ordinary left lateral gynæcological position. Then the operator introduces the index and first fingers of his left hand through the sphincter ani upwards and forwards along the outlines of the posterior uterine wall, the fundus being pressed down by his assistant's hand over the hypogastrium. In this way the tubes and ovaries can be readily palpated, and if there be any inflammatory or cystic enlargement of the former it may be distinctly recognised as a tortuous, elongated, or sausage-shaped or rounded fluctuating tumour, extending, as Dr. Wm. Duncan says, "from the side of the uterus outwards to the broad ligament and backwards into Douglas's fossa." Having thus ascertained the position of the pyo- or hydro-salpinx, the next step is to carefully introduce per vaginam on the point of the right index finger a long fine needle affixed to the aspirator up to the roof of the posterior vaginal *cul-de-sac*, through which it is to be passed into the retro-vaginal fossa, and thence guided by the operator's left index from the rectum up to the most prominent presenting part of the tubal swelling, into which it is to be plunged. The tap of the aspirator is then to be turned, so as to give exit to the contents of the dilated tube, the expulsion of which may be assisted by the steady pressure of the assistant's hand from about the hypogastrium down into the pelvic cavity, and continued until the tube is completely evacuated. After this the vagina should be rendered aseptic by insufflation with iodoform, and then no further local treatment beyond hot water irrigation will generally be required, unless the tube should, as sometimes happens, again fill, though probably to a lesser extent, when the same procedure may be again and again, if necessary, repeated until the oviduct has become reduced to its normal size.

Curetting Fundal Orifice of Tubes; Treatment by Electricity.—Apart from malignant and other degenerative changes, the most common immediate cause of cystic accumulations in cases of chronic salpingitis is mechanical obstruction of the uterine orifice of the oviduct, due either to chronic follicular endometritis, flexion, or, in some instances, supra-involution of the uterus. Under such circumstances the tubal obstruction is most likely to be relieved by dilatation followed by curetting of the diseased proliferating endometrium in the first instance, or by the rectification of the flexion in the second, and by faradisation in the last-named cases. The faradic current has, moreover, not only in these, but also in other forms of chronic salpingo-oöphoritis, been in some instances successfully employed by Dr. Apostoli, of Paris, who generally employs in such cases the faradic current of tension applied in moderate doses and for only a few minutes at a time, for which he claims the most remarkable curative results in such cases. Another recent authority on this subject—Dr. Milne Edwards, of Edinburgh, does not believe, however, that the galvanic current is suited to cases where there is definite organic change in the ovaries, but considers that here faradism may possibly be of service.

Removal of Uterine Appendages.—In those graver and, as I hope may yet be found by others of higher authority than myself, somewhat more exceptional cases than is generally supposed, in which, from the extent of Fallopian disease, or from the implication in its course of adjoining structures, the urgency of the symptoms attending its progress or other causes, it becomes impossible to deal satisfactorily or safely with such cases by the methods already referred to, and in which more active surgical intervention is obviously indicated, there then only remains for our adoption the complete removal of the uterine appendages.

That operation has, however, now come into vogue under other circumstances than these, being supported by a large number of modern gynæcologists, as not only the most efficient, but also, in the cases in which it is required, the safest method of dealing with the tubal diseases referred to; and hence the procedure which should be generally adopted in such cases. This doctrine I cannot, myself, altogether unreservedly accept, believing, as I do, that in some instances the results of salpingitis are curable without any active treatment, and that in other cases they are amenable to the minor measures I have described. Nevertheless, in this hospital and elsewhere I have met with cases in which the only apparent alternatives were either the speedy death of the patient from Fallopian-tube disease or else the complete removal of the affected appendages, by what is generally known as "Tait's operation," after the name of the distinguished surgeon by whom it was introduced, and has been most successfully carried out in this country. In the following observations I shall therefore very briefly describe that operation, or, at least, that method of performing it which you have here seen practised, premising that, regarding, as I still do, the ovaries and tubes as both essential factors in the menstrual function, it follows that when the latter are removed, with salpingotomy should also be combined öophorectomy, to obviate the possible consequences of an abortive or abnormally-accomplished process of ovulation. Nearly all the preliminary successive steps of this procedure being identical with those of ovariotomy, I shall merely allude to those points in which these operations may be contrasted. The first and most obvious of these is the smaller size of the abdominal wound required for removal of the appendages. This incision should only be just sufficient to allow the introduction of the two first fingers of the operator's left hand, which should be passed down to the fundus uteri, by the position of which he will be readily guided to the contiguous tubes and to the ovaries. In such cases the often widely-distended oviduct must be most tenderly handled to avoid extravasation into the peritoneal cavity of a pyo- or hydro-salpinx, which may occasionally be prevented by aspiration of the diseased tube before any attempt to draw it out through the abdominal wound, as must be the next step in this operation when not rendered impossible by extensive inflammatory adhesions. Having thus drawn out, as far as can be safely done, the affected tube and ovary, so as to form a kind of pedicle from the broad ligament, through the centre of which, carefully avoiding injury to blood-vessels as far as possible in so doing, a blunt-pointed needle carrying a double ligature of stout silk is to be passed. This ligature may next be secured by an ordinary "reef knot," which I have found sufficiently reliable and easier to make than it would be for me to acquire the probably still better "Staffordshire knot," the use of which has been thus described by Dr. Macnaughton Jones:—"A loop of double ligature is passed through the centre of the broad ligament, avoiding the vessels. The loop is then turned back so as to include both the ovary and tubes in the two loops thus formed. One free end is then passed through the returned loop; both ends are now drawn together and then cut off." Whatever ligature be employed it should secure the pedicle, from which the ovary and oviduct are next to be separated by a blunt scissors curved on the flat, a little above the point of ligation, which may be then dropped back into the peritoneal cavity. A similar procedure may then be adopted with regard to the remaining ovary and tube, after which the abdominal cavity may be washed out with warm water, the wound closed, and the case treated on the same general principles as an ordinary ovariotomy.

This operation, although under ordinary circumstances feasible enough to any surgeon, is occasionally, however, one that might puzzle the most dexterous specialist to carry into effect. The difficulty of removing a Fallopian tube that may possibly be distended to the point of bursting by a pyo-salpinx, without risk in so doing of rupturing the thin tensely-stretched walls of the purulent sac into the peritoneal cavity, is obvious. But where, moreover, as occasionally happens in such cases, the ovaries and tubes are matted together, and to the ligaments, uterus, and other adjoining structures in one inextricable mass by inflammatory exudations and adhesions, that difficulty may be converted into an impossibility in some instances. I have myself had occasion to remove the uterine appendages in several cases, and, as I believe, have generally obtained results neither better nor worse than the average of other ordinary gynæcologists. But, at the same time, I think it not improbable that such other practitioners as well as myself may have sometimes regretted that they had not either operated earlier or that they operated at all in those exceptionally unpromising cases to which I have just referred.

The immediately successful results now obtained from the removal of the uterine appendages in the majority of cases, and the very small mortality consequent on its performance in suitable cases in the hands of skilled specialists, has been proved beyond any possibility of question by the statistics of Mr. Tait's vast series of cases, as well as by those of Dr. Bantock and many other eminent surgeons. Of the ultimate curative results of removal of the uterine adnexa, however, a less hopeful view is taken by some authorities whose opinions on this subject are no less entitled to consideration. Thus Mr. Alban Doran observes:—"As a rule, oöphorectomy for chronic disease of the appendages is followed by speedy convalescence. Unfortunately, a permanent cure is not so frequent. Mental symptoms occasionally follow double oöphorectomy. The cases where the stump suppurates are particularly unsatisfactory. Fistulous tracts open, close, and re-open in the abdominal wound for months, discharging thin pus. Such cases find their way to the consulting rooms of others, or to other hospitals than the institution where the operation was performed. The operator hears no more of them, and he or the hospital registrar records them in perfect good faith as 'cures.' A larger minority suffer from a continuance of the pains which preceded the operation, probably on account of intestinal adhesions, or through irremovable inflammatory products which press on nerves. The ligatures certainly set up trouble in some cases."[*]

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[*] Alban Doran, F.R.C.S., "On Treatment of Chronic Diseases of Uterine Appendages" in the Lancet, January 17, 1891.

Somewhat similar views have been previously expressed by other writers. Thus Dr. H. C. Coe, in the Proceedings of the New York Academy of Medicine, observed:—"There are not a few women now attending the various clinics in New York who have had their ovaries and tubes removed, and yet who complain of precisely the same pain as before; in fact, I can recall cases in which, although the menstrual disturbance is wanting, the pain is more severe than it was before."

I, therefore, think that, without in any way questioning the necessity for these operations in many instances, or the success and small mortality which has attended their performance in the hands of a few distinguished surgeons, the great body of medical practitioners who occasionally must meet and deal with cases of Fallopian tube disease, should be very slow to adopt operations the success of which can only be assured by exceptional skill, and that even where the circumstances of the case preclude the possibility of transferring the responsibility to those possessing that capacity, they should, before attempting to imitate their practice, at least fairly and fully try the less heroic but yet often successful methods of treatment to which I have already alluded. I have recently had clinical reason to know that the repetition of this recommendation is not superfluous at the present time, having in this hospital within the past couple of sessions met with the effects of its disregard.

A few years ago I brought the increasing frequency in general surgical practice of operations for the removal of the uterine appendages, and by no means only when rendered necessary by Fallopian disease, or for uterine myoma, under consideration in papers read before the Obstetric Section of the British Medical Association and elsewhere, to which I have already referred. And as the general accuracy of my opinions on this subject has been confirmed by my more recent experience, I may here recapitulate the views I then expressed, and still hold.

I fully recognise the fact that the first duty of the surgeon is to save his patient's life; and, therefore, if in a case of Fallopian tube, or other, disease, this can only be done by immediate removal of the uterine appendages, that this operation should then be at once resorted to. But under any other circumstances it should never be lost sight of that the uterine appendages are as essential to reproductive capacity in women, as are the testes in men, and that by their complete removal the patient is practically unsexed or incapacitated for the chief function and primary object of woman's married life. Nor does it seem to me ever justifiable to perform such operations without the patient's full concurrence and knowledge of the consequences—a rule the propriety of which is obvious, and is now generally recognised and acted on. At the same time, however, it appears to me that the removal of the ovaries and Fallopian tubes is even yet occasionally somewhat too readily resorted to in non-organic disease as a possible means of benefiting neurotic and hysterical symptoms. It may, therefore, be well to repeat that other operations and methods of treatment have ere this been for a time as generally accepted; and then, having perhaps been carried beyond their judicious application, have fallen into desuetude. We have, therefore, no guarantee in the present frequency of resort to the removal of the uterine appendages that the same may not in course of time happen also with regard to these operations which, unquestionably valuable and successful as they have proved in the hands of some eminent surgeons, in cases of absolute necessity should, in my humble judgment, never be lightly regarded as measures of election.

The question of election or necessity I regard as the cardinal point to be decided in considering the expediency of removing the uterine adnexa in the treatment of Fallopian tube disease. In many instances, unquestionably, as I have already said, that course becomes an unavoidable necessity, and is then the obvious duty of the surgeon. It should never be forgotten, also, that in probably a no less large number of cases tubal diseases may be successfully treated by the much less heroic, but remedial and conservative, measures to which I have referred.

POISONING BY THE EXTERNAL APPLICATION OF TOBACCO.

THE following case of poisoning by the external application of the infusion of tobacco was reported in the *Journal de Médecine de Bordeaux*:—A young man suffering from pediculi pubis determined to kill the vermin by sponging his skin with an infusion of tobacco. He boiled 200 grammes of tobacco in 2 litres of water; with this he sponged himself freely, and in a short time repeated the application. Two hours afterwards he felt a dull heavy sensation in his head, followed by vertigo, blindness, and vomiting. He had cold sweats, cold purple-coloured extremities, and his mind began to wander. His respirations were diminished and he spoke with difficulty; the heart was very feeble and the pulse hardly discernible; the limbs were unsteady and tremulous on movement.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

RECENT WORKS ON LARYNGOLOGY.

1. *Transactions of the Twelfth Annual Meeting of the American Laryngological Association.* May, 1890. New York: D. Appleton & Co. 1891. Pp. 131.
2. *Diseases of the Nose.* By SPENCER WATSON, F. R. C. S. Eng., &c. London: H. K. Lewis. 1890. Second Edition. Pp. 312.

1. THE volume of Transactions of the Twelfth Annual Meeting of the American Laryngological Association contains seventeen papers, with full reports of discussions thereon. These transactions are well worthy of the attention of those taking especial interest in such matters; and some of the papers contain information useful to the general practitioner. Frank Donaldson, M.D., contributes a most interesting "Historical Review" of the laryngology of Trousseau and Horace Green, dealing with the period "anterior to Garcia's successful inspection of the larynx." The writer points out that Trousseau considered that the epiglottis formed an insuperable impediment to a view of the interior of the larynx; and his treatment consisted in applying solutions of nitrate of silver, injected by curved silver tubes passed behind the epiglottis.

Horace Green in 1846, by expert manipulation, succeeded in passing, by a probang, solutions of nitrate of silver into the larynx. A committee of the Medical and Surgical Society of New York condemned this practice, and publicly denied the possibility of cauterising the interior of the larynx; but Green triumphantly demonstrated his method in the case of a man who had attempted suicide by cutting his throat, and in whom the opening in the trachea had never healed.

H. L. Swain, M.D., has a careful paper on adenoid tissue in the naso-pharynx and pharynx, in which he describes the development of this tissue, and cites facts in comparative anatomy in relation to its occurrence otherwise than in man. The writer discusses various theories as to the probable purpose of these structures, and cites the views (1) of Killian, who considers that their function is to destroy micro-organisms by the multitude of leucocytes present in them; (2) of Spicer, Fox, Schmit, and Stöhr, that they take part in the production of blood; and (3) of Davidoff, who considers that they assist in carrying some altered food into the system.

Dr. Swain himself inclines towards Killian's views.

One of the best papers in the volume is that of S. W. Langmaid, M.D., on Hoarseness and Loss of Voice, caused by wrong vocal method, in which he rightly inveighs against the evil effects of insisting, as many teachers of singing do, on the tongue being depressed and flattened during the production of *all* vocal sounds; he shows that this, when insisted on, tends to produce serious and unnatural strain on the laryngeal muscles, which often ruins the voice.

A long discussion on the various methods of operation used for the correction of deviations of the nasal septum is reported, the outcome of which seemed to be in the direction of more or less disappointment with results in such cases.

On reading these transactions it is very clear that American specialists are at least not behind in knowledge and resource.

2. The first edition of Mr. Spencer Watson's work on "Diseases of the Nose" was published in 1875, and remained for many years almost the only book on the subject available for English readers; and one is almost inclined to doubt the wisdom of the writer in not retaining his honourable position of a pioneer in a branch of medical work which has recently undergone a wonderful development, and has become generally recognised as possessing much importance in its bearing on various affections of other organs. By bringing before the profession a second edition the writer lays himself open to, on the one hand, a comparison which can scarcely be considered favourable with such a work as Bosworth's fine and exhaustive volume on the same subject lately noticed in this journal, and, on the other, to ignoble competition with the many—the very much too many—productions compiled by juvenile aspirants for the fees of a confiding public, whose lack of experience and judgment are only surpassed by their cool assurance in posing as authorities on matters, on many of which they must necessarily be incapable of forming

an opinion which could compare in value with the often very excellent paper on which it is printed. Therefore, we think that our author might have been better advised had he rested on the laurels which he so well won as a very early worker in this important field.

The book has been almost rewritten. This, of course, was a necessity. Many sections are entirely new, and much of the matter contained in the first edition has been omitted. The entire work, so far as it goes, is up to date, and we have the great advantage of Mr. Watson's calm and judicial conclusions on several subjects on which wild and untenable views have been broached, and very diverse opinions held, as, for example, in Section XVI., on Reflex Neuroses, p. 292.

The first section deals with the anatomy and physiology of the nose. It is unequal. There is a full description of the nasal mucous membrane, as regards its variations in the nasal and accessory cavities, and its histology; but the turbinates are curtly dismissed in a few lines, and with merely a passing reference to their erectile tissue—no mention being made of Zuckerkandl's important researches.

In Section II. is a description of the methods and appliances necessary for examination of the cavities of the nose and of the instruments required for treatment.

At p. 34, among "preliminary remarks on nasal stenosis," we fail to find any mention of turgescence of "the vascular membrane over the turbinated bones" due to vaso-motor troubles—a condition very important both from the pathological and practical side—the only causes mentioned are "temporary (as in catarrh) or permanent (as in chronic hypertrophy)."

At p. 47 is a short paragraph which it would be a pity to overlook. It shows an excellent sense of dry humour on the part of our author; in reference to the treatment of acute nasal catarrh, after giving details of several methods, he says:—"Many other remedies besides those enumerated above have been extolled as efficacious, and the difficulty of choosing from among them is therefore great." He then continues—"Multiplicity of remedies in this, as in other diseases, implies either a tendency to spontaneous recovery without remedies, or a doubtful efficacy of many of the remedies themselves." This is rather hard on Messrs. Sidney Ringer (aconite), Hagner (his "Olfactory"), Ferrier (his "Snuff"), J. Moure (his "Snuff" also), not to mention other remedies recommended by bearers of less-known names. At the risk of appearing optimistic we may say that we have found that, at least, much temporary relief—often welcome during and after meals, or at night—may be obtained from using, either as spray or by simply sniffing, a small quantity of a lotion composed of equal quantities of hazeline, glycerine of borax, and a 6 per cent. solution of cocaïn.

We are quite in accord with Mr. Watson as to the scrofulous taint favouring the occurrence of hypertrophic rhinitis, although this view is not universally held by writers of authority on the subject. We also agree with him in his opinion that the electric cautery is "the most rapid, less painful, and more effectual" method of dealing with the hypertrophied tissues in this affection; in the milder cases we have obtained good results by the use of plugs of cotton coated with equal parts of glycerine and lin. iodi, a mode of treatment which is not mentioned by the author.

In the section on gelatinous polypi the operative methods now generally used are well described. We do not observe, however, that any mention is made of a method which we have found very useful in cases where, for any reason, the ordinary practice of snaring, &c., is not advisable—viz., the injection into the substance of the growth of strong astringent solutions, such as a saturated solution of tannic acid or solution of iron alum; some excellent results may be thus obtained. We are glad to find that Mr. Watson favours the after treatment by means of astringent applications, &c.

Mr. Watson seems to consider Dr. Negrier's treatment of epistaxis, by the raising perpendicularly upwards and retaining in that position the arm of the side affected, as something novel; we, however, have a very distinct recollection of the adoption of this method in our own juvenile person by an old nurse—with apparently successful results. Still we may, perhaps, at least allow Dr. Negrier the credit of an independent discovery in therapeusis.

In the treatment of tertiary syphilitic ulcers, while, of course, the chief reliance must be placed on the internal use of K.I., still we would not, as Mr. Watson implies, restrict the local use of mercurial applications to the cases in which the primary or secondary stages appeared not to have had the full benefits of a course of mercury, as we believe that there are very few cases in which the local lesions will not be benefited by a wash or spray of perchloride, which has many advantages in ordinary cases over the calomel fumigation recommended by the author—although we are, at the same time, quite ready to admit that some intractable cases of ulceration seem to yield to the fumigation method when all others have failed.

We cannot altogether agree with Mr. Watson when he says (p. 118) that if, after a trial of full doses of K.I., "there is no amendment in the symptoms, it will be better to give up specific treatment altogether, and to rely upon topical applications and the internal administration of cod-liver oil and iodide of iron," as we have seen more than one case in which there could be no doubt that the symptoms were those of the tertiary stage, and where the iodide of potassium had been given every chance without benefit, while immediate improvement followed the exhibition of carefully regulated doses of the green iodide of mercury combined with opium. We would not only agree with Mr. Watson as to the use of cod-liver oil, with or without the iodide of iron, in certain cases, but would go further and recommend its use as a "finishing touch" in the treatment of all cases of syphilis.

As might be expected from the very important advances made during the past fifteen years in reference to the far-reaching effects of vegetation in the naso-pharynx, and the methods of their treatment, the section dealing with this subject is quite new, only little more than a page having been devoted to this subject in the first edition. The section is practical and sufficiently full. The author quite recognises the fact that struma is a frequent factor in these cases, although, strange to say, this has been denied by writers of experience.

In dealing with disease of the frontal sinus, we find no mention of simple catarrhal inflammation of their lining membrane. This is not an unknown condition, and can give rise to much suffering. Mr. Watson is very dogmatic as to the most frequent cause of suppuration in the antrum. He says, in italics, "by far the most frequent cause appears to be the extension of suppuration from the root of a carious tooth, or from the periosteum surrounding it." With this opinion we are inclined to agree.

The section on anosmia and other derangements of the sense of smell is good, and chiefly new.

In dealing with reflex neurosis depending upon intra-nasal disease (Section XVI.), the author speaks with commendable caution. He gives a list of authors who have "in turn called attention to facts bearing upon the subject, and have formulated theories in support of the views propounded." Having recapitulated the long catalogue of disorders "*supposed* [the italics are ours] by Hack to depend upon turgescence of the inferior turbinated body," he says—"Hack also feels justified in treating rheumatic inflammation of the joints by cauterising the inferior turbinated body." Here, again, we think we can discern another instance of our author's humour. We fear he is not an implicit believer in Hack's novel treatment of articular rheumatism.

We think that in the following words Mr. Watson expresses admirably the opinions which should be held in reference to the subject. He says (p. 292)—"Without committing myself to the views thus laid down, I think there can be no doubt that in certain persons predisposed by an arthritic or some similar diathesis, intra-nasal disease will often produce some of these forms of nervous disorder. Asthma is the form of neurosis most commonly thus produced. About many of the others I feel considerable doubt."

The volume is liberally illustrated by plates and woodcuts, in both instances fairly up to the average of such as produced in these countries. There is a fairly full index, which includes the names of authorities quoted or referred to.

The Neuroses of Development. Being the Morison Lectures for 1890. By T. S. Clouston, M.D. Edinburgh: Oliver & Boyd. 1891. Pp. 138.

In his preface the author thus defines the object of his work—"In the course of the growth and development of the brain there are liable to occur certain failures in the attainment of a working standard of nervous and nutritional health, and the resulting defects or diseases may properly be called 'Neuroses of Development.'" "The following lectures are a most imperfect and fragmentary attempt to treat of such defects and diseases looking at them chiefly from the developmental and relational points of view." The brain has attained about 90 per cent. of its final weight at the seventh year of life, while growth is complete at seventeen years. It is evident that even at the latter age functional perfection has not been attained. Hence the functional development of the brain is very slow, and this makes it peculiarly prone to be influenced by hereditary evil tendencies.

The occasions which bring out the hereditary defects are taken as the basis of an attempt to classify developmental defects and diseases, most of which are neurotic in origin. They are placed under four heads:—

1. *Formation and Embryonic Stage*—including the deformities present at birth, as cleft palate, talipes, spina bifida, as well as others not so evident, such as fibroma molluscum, and some kinds of genetous idiocy.

2. *Period of most rapid Brain Growth, Special Sense Education, Motor Co-ordinations, and Speech* (from birth up to seven years).—Under this head we find, among many others, the following—rickets, hypermetropia, ichthyosis, and tubercular meningitis.

3. *Period of Co-ordination of Motion and Emotion* (from seven to thirteen).—Chorea, epilepsy, asthma, megrim, myopia, &c.

4. *Puberty and Adolescence* (from thirteen to twenty-five).—Chlorosis, interstitial keratitis, ingrowing toe-nail, subungual exostosis, naso-pharyngeal polypus, phthisis, acute rheumatism, barrenness, adolescent stupidity, adolescent ugliness, &c.

The examples we have given chiefly to show that Dr. Clouston pushes the idea of developmental influence rather further than most persons would be inclined to do.

He places great, probably too great, stress on the pathogenetic influence exerted by the development of the "absolutely new and tremendously intense feelings connected with reproduction" which appear at the time of puberty.

In the second lecture, on some of the morphological signs of a bad neurotic heredity that appear during development, we find a most interesting account of the observations made by the author on the deformities of the palate in neurotics. From a careful consideration, and guided by a new method of measurement, he classifies palates into three divisions:—1. The *typical*, or *normal*, corresponding to what was called by Joy the horseshoe arch, having a low but regular and wide dome; 2. The *neurotic* has a more Gothic arch, with the alveoli tending to run more parallel for a greater distance than the typical, and with a much higher and narrower dome, the roof of which is formed by a larger part of a smaller circle; 3. The *deformed* is of various shapes, all abnormal, but the most common form is very high, very narrow, and at the top either V shaped or saddle shaped. All these forms are illustrated by excellent drawings.

Of 604 persons of the general population examined, 40·5 per cent. had the typical palate, 40·5 the neurotic, and only 19 the deformed. Of 286 degenerate criminals only 22 per cent. had normal palates, 43 the neurotic, and 35 the deformed. Of 761 cases of acquired insanity there were 23 per cent. normal, 44 per cent. neurotic, and 33 deformed. Of 44 epileptics the numbers were 20, 43, and 37 per cent.; of 171 cases of adolescent insanity, 12, 33, and 55 per cent.; while of congenital idiots and imbeciles the numbers were 11, 28, and 61 per cent.

> "In considering the palate and upper maxillary bone we must take into account the following considerations, viz.:—
>
> "1. Its relation to the base of the skull in man. This relation is seen to be close and absolute, as compared with the lower animals. The perpendicular line, which marks the most anterior part of the brain, is seen to fall in man through the centre of the hard palate, while in the monkey it only just touches its posterior margin. In man it has thus a direct relationship to the brain base, and its shape would be dominated by the width of this, while in the monkey it is merely a part of the alimentary system, having little relationship to the base of the brain at all. No one can compare the two without seeing that its conformation in man will naturally follow any changes that take place during development in the skull base. 2. If the skull in its growth, its size and shape, its dome and base, is absolutely dominated by the brain which it defends and contains, then the brain growth will in this way secondarily determine the shape of the upper maxillary bone and the palate. 3. The brain unquestionably deriving its shape and size and qualities from ancestry, and a bad heredity determining a bad brain, we see how a bad nervous heredity would naturally determine an abnormal palate."

It would be impossible for us to follow Dr. Clouston through his descriptions of all the diseases which he looks on as developmental, or to reproduce his arguments and reasoning in support of his views. In some cases he appears to be too inclined to see everything through the nervous system, as when he says of rickets, "It is clearly a trophic neurosis, probably due to want of sunlight sufficient to give stimulus to the central trophic nervous centres which innervate the bones." And surely it is not fair to give the "terrible family tree" sprung from an asthmatic but otherwise healthy man as an example of what may be expected in the descendants of a person suffering from this distressing but common affection (p. 67).

Hysteria, from its late occurrence, is supposed to be more closely related with adolescent insanity than with any other of the developmental neuroses. Hysteria is looked on as "a cortical disease, probably taking its special form from functional disturbances in those mental cortical centres where the reproductive impressions are received from their organs, and where those impressions are brought into relationship with the innumerable emotions, desires, and volitional efforts that relate to reproduction or arise out of it."

What we have given is perhaps sufficient to show the wide scope and philosophic character of these lectures. It is impossible to fail to recognise their importance, although we may, in some cases, think the views of the author are somewhat extreme. The numerous well-recorded and suggestive cases by which the lectures are illustrated add greatly to the value of a most excellent work.

RECENT WORKS ON ANATOMY.

1. *A Treatise on Practical Anatomy.* For Students of Anatomy and Surgery. By Henry C. Boenning, M.D.; Lecturer on Anatomy and Surgery, Philadelphia School of Anatomy, &c. Philadelphia and London: F. A. Davis. 1891. Pp. 481.

2. *Quain's Elements of Anatomy.* Edited by E. A. Schäfer, F.R.S., and George D. Thane. In Three Volumes. Vol. I., Part II. By Professor Schäfer. Tenth Edition. London: Longmans, Green, & Co. Pp. 261.

1. There are some books which set us athinking; the "Treatise" under notice is one of these. Works on anatomy are not popularly considered to be conducive to meditation. The above must be an exception. Ever since we read it we have been meditating over a question which a run through the book immediately suggests—What can have induced the author to undertake to write on anatomy? Up to the present we have been unable to arrive at any solution of the puzzle. Under the name of an anatomical treatise we have never read anything like it. If we had been shown the book in manuscript, and asked what we thought it was, our reply would have been "A student's anatomical note-book—*uncorrected.*"

The author is very modest when speaking of his work in th preface. He says—"It will be found fully abreast of the late teachings in anatomy, and in some directions decidedly aggressive Decidedly aggressive we must admit it is. Again we read, "th book is not a compilation." This, too, is evident, and to b regretted. And he adds, "the descriptions have been taken fro the subject on the table." If so, we cannot get such subjects i this country. In ours we do not usually find the capsule of th hip-joint attached to the posterior intertrochanteric line, the radi artery crossing over the back of the base of the metacarpal bone o the thumb, nor the posterior interosseous artery running along th interosseous membrane. Our subjects rarely treat us to a radi nerve which "*accompanies the radial artery and is distributed t the muscles of the forearm and thumb* and to the integument o the dorsal surface of the thumb, index, and middle fingers." No can we consider that such descriptions as the following are "full abreast of the latest teachings in anatomy":—"*Middle cerebra artery* lies in the fissure of Sylvius, and sends branches to th meninges." No more information is vouchsafed on the subject which is one of no small importance. "*Hunter's canal* is an obliqu canal through the adductor magnus." The "temporo-sphenoida convolutions are horizontally disposed," &c. "The corpus striatu rests on the anterior portion of the crus cerebri of each side." Bu the most unique thing in the book is probably the charmingly simple explanation of the brachial plexus. It is really refreshing in its novelty and simplicity. To do it justice we must quote the passage in full. We are told:—"The arrangement of the plexus can best be understood by the following formula: 3 nerves + 2 nerves = 2 trunks + 3 cords, or briefly, 3 N + 2 N = 2 T + 3 C." (It is to be remembered that this is neither a chemical equation nor a problem in algebra.) "In explanation" (the description goes on) "let it be remembered that five spinal nerves enter into the brachial plexus; that the fifth, sixth, and seventh unite to form the upper trunk; and that the eighth cervical and first dorsal unite to form the lower trunk: here we get 3 N + 2 N, which equals the sum of 5. Draw a line through the plexus, internal to the two trunks formed by the five nerves, thus:—" (Here comes a meagre diagram, which seems to give very little assistance in elucidating matters; still the text runs on happily) "and the rest of the formula becomes clear, forming 2 trunks plus 3 cords, or in full (3 N + 2 N = 2 T + 3 C), and from the cords the principal branches of the brachial plexus are given off. The figure 5 is the key to the plexus."

And this is called Anatomy!

2. We have already noticed two parts of this work; we have now a third before us. The two former parts were devoted to Development and Osteology respectively, the present one is on General Anatomy or Histology. We understand that there are still to come three other parts, which will complete the work: that on Ligaments, Muscles, and Vessels is nearly ready. In writing of the divisions which we have already reviewed we almost exhausted our store of praise. We need only say of the present part that it is a fitting companion for its predecessors. It is a thorough, clear, and scientific exposition of the subject of general histology, fully in touch with the best and latest teaching of the day.

It should be pointed out that the part embraces only the histology of the tissues and systems—viz., of the epithelia, the connective tissues, including blood, cartilage, and bone; of muscle, nervous tissue, the blood and lymph vessels, lymphatic and secreting glands, mucous membranes, and the skin and its appendages. There is also an excellent introductory chapter on the cell, protoplasm, and cell division, which is entirely new. It gives a thorough *résumé* of the recent advances in the anatomy, physiology, and chemistry of the cell—subjects to which much attention has been paid of late in several great schools of biology. The histology of special organs is still to come in later parts.

It would be useless to attempt to mention all the additions which have been made to this division of the work in the present edition. The whole part has been almost completely re-written, so that many of the old descriptions have either disappeared or been much altered in accordance with more modern teachings. As in former editions the work bears traces of the greatest care, and the most patient labour. The descriptions are in the clearest and most direct scientific language; they are as brief as the nature of the subject and the character of the work would permit. Every line seems to have been thoroughly weighed and considered before being put into its place. The result is the production of a whole so solid and compact that it strikes the reader at once as being sound in every fibre. There is an earnestness and an impressiveness about the style which carries with it conviction and satisfaction. One leaves down the book with a feeling that the information he has got is thoroughly reliable, and that he has read the best that can be said on the subject.

The illustrations, which form a notable feature of this tenth edition, are very beautiful. Many of them are old friends of former issues, but a large number are quite new—particularly is this the case in the chapter on the cell. The figures illustrating the histology and development of bone call for special commendation, as do those in the chapter on nervous tissue.

In conclusion, we are thoroughly pleased with the book before us. We feel that "Quain" is almost a national institution in which we are all deeply interested. As the great Anatomy of our language we look upon it with pride, and we watch its progress with jealous eye. We feel fully satisfied that in the hands of its present editors its characters and its fame are safe, and we can only add our warm congratulations upon the success with which they have so far accomplished the difficult task which has fallen to their hands.

The Johns Hopkins Hospital Reports. Vol. II. No. 6. Report in Neurology I. Baltimore: The Johns Hopkins Press. August, 1891. Pp. 78.

This part of these valuable hospital reports contains four papers, all of considerable interest.

The first is a Case of Chorea Insaniens, with a Contribution to the Germ Theory of Chorea, by Dr. Henry J. Berkley. It details the particulars of a fatal case of chorea, with delirium, occurring in a young woman, aged twenty-seven, with the *post-mortem* examination. No bacteria were actually found in the nerve centres, but the changes found in the brain, meninges, and kidneys were very similar to those found in other unquestionably bacterial diseases, as diphtheria. They are—general hyperæmia of the internal organs; patchy endo-arteritis, with foul increase of round cells in the neighbourhood of the vessels; general increase in the number of leucocytes in the vessels; swelling of the endothelium; slight œdema of meninges and brain; granular and fatty degeneration of the renal epithelium; fatty degeneration of the heart muscle; hyaline globules in the lumen of many vessels; hyaline masses round the same; granular detritus; leucocytes in meninges enclosing fatty particles; round-celled foci in kidneys. The appearances were similar in a dog suffering from chorea when killed. It is concluded that chorea is a general systemic affection, acting with greatest intensity on the vascular system and lepto-meninges, and that its cause is to be sought for in an especial bacillus or its toxical product.

In the second paper Dr. Charles E. Simon records three cases of acute angio-neurotic œdema. The affection first described as a distinct disease by Quincke, in 1882, under the term Acut. umschriebenes Hautödem. All these cases occurred in young women. The paper is an important contribution to the literature of this ill-understood affection. A good bibliography of the subject is appended to the paper.

The third paper is on Hæmatomyelia, by Dr. Aug-Hoch. Two cases are recorded in which, suddenly, some time after an injury to the back, paralytic symptoms supervened. Neither case died, so that the diagnosis is conjectural. The cases are distinguished by the great care with which they have been examined and recorded. The differential diagnosis is made from hæmatorrhachis, acute myelitis, and acute ischæmic myelomalacia. The subject is argued with great acuteness and ingenuity, and there can be little doubt on the reader's mind that the diagnosis of hæmatomyelia is justified. In one of the cases the form of the paralysis is that described by Brown Séquard as following unilateral injury of the cord, motor paralysis on one side, loss of sense of temperature, and pain on other side.

In the fourth paper, Dr. Henry M. Thomas records a fatal case of cerebro-spinal syphilis, with an unusual lesion in the spinal cord. The following are the clinical and anatomical summaries:—

Clinical Summary.—Male, aged thirty-three; no syphilitic history; paralysis of right sixth cranial nerve, accompanied by intense headache in January, relieved by treatment. In May, headache and paralysis of left fourth nerve. In November, paralysis of left third and fourth nerves; weakness of the muscles on the right side of the body, with slight sensory changes; increasing coma; death.

Anatomical Summary.—Syphilitic orchitis; syphilitic endoarteritis (gummatous) of cerebral arteries; gumma on left third nerve, involving left anus; gummata on left fourth, right sixth, ninth and twelfth nerves, and in brain; gumma on anterior roots of third cervical nerves; meningitis of cord; polio-myelitis of lumbar enlargement; hyaline degeneration in the walls of the small arteries.

The anatomical changes found are illustrated by a large number of highly demonstrative drawings. The case is of very great interest, particularly as illustrating the changes produced by syphilis in the cord, a subject as yet very imperfectly investigated. Besides the hyaline degeneration of the vessels and capillary hæmorrhages, a condition of the lateral tracts was found which is considered to be an early stage of secondary degeneration. In the grey matter of the lumbar enlargement there was found extensive destruction—an anterior polio-myelitis, accompanied by capillary hæmorrhages, which had gone so far in some places as to cause the breaking down of the tissues and the formation of cavities of quite considerable size, which had probably been preceded by comparatively large hæmorrhages. It is thought most probable that the changes in the grey matter were not primary, but secondary and dependent upon the lesion of the blood vessels.

Epidemic Influenza; Notes on its Origin and Method of Spread. By RICHARD SISLEY, M.D. London: Longmans, Green, & Co. 1891. Pp. 150.

THIS able and vigorously-written monograph has for its object to prove that influenza does not arise suddenly from any general aerial contamination, but that it begins always by isolated cases and spreads from these by infection until it reaches the dimensions of an epidemic.

The cases reported in which a whole town or continent was simultaneously affected are found, when submitted to strict examination to be wanting in proof, and the same may be said of the reported outbreaks on board ships at sea, and which have had no communication with the shore.

Influenza seems to be endemic in China, and very prevalent in Central Asia. The epidemic of 1889–91 appears to have had its starting point in Bokhara, where the height of the epidemic was reached in July, 1889. St. Petersburg was affected in October, and the height of the epidemic was attained in November. In Berlin and Vienna the disease was a month later. In both cities the greatest mortality was in the same week in December—a month later than in St. Petersburg, and a week earlier than in Paris. From the latter city the disease was imported to Montpellier, also to Frontignan; and many other examples of spread by intercourse with infected places are recorded from France. In all instances isolated cases preceded the outbreak of the epidemic, and the height of the disease was only gradually reached, as in other infectious diseases. A very remarkable case is recorded from Brest. There were three ships lying close to one another. One of the officers of the "Bretagne" contracted the disease on shore, apparently by infection through parcels received from Paris. After having infected his wife and three servants on shore, he returned to his ship, There the disease broke out, and spread rapidly among the crew, 25 to 40 new cases occurring daily. Some of the sick persons were allowed to go to their homes. In every case the disease spread to the members of their families. All this time the two other ships lying close were free from the disease. The case is almost conclusive as showing that the disease is not spread by the air, but by contagion from the sick. In London, naturally, great difficulty is experienced in tracing the origin of an epidemic. But there numerous local outbreaks are recorded in all of which the disease began by isolated cases, and gradually extended from these until an epidemic was reached. One of the best observed of these is the outbreak in Broadwood's piano manufactory, as recorded by Dr. Delépine in the *Practitioner*. Both in London and the other large English and Scotch towns, and still more in the country districts, everything pointed to contagion as the cause of spread, and not any general microbe affecting the whole community simultaneously. This was shown by the invariable occurrence of isolated cases before the epidemic, the introduction of the disease in many instances by persons who came from an infected locality, and by the fact that the spread of the disease was along the most frequented lines of human intercommunication. It is manifestly impossible in a country like England to trace the route of infection in every case. "When these facts are borne in mind, it will readily be acknowledged that the unexplained appearance of the disease in an isolated place only points to our incomplete knowledge as to its introduction there, and need never excite wonder." London was affected in October, 1889; Manchester, in November; Colchester, Canterbury, Chelmsford, Oxford, and Liverpool, early in January; Birmingham, in second week of January. Places more remote, as Feversham, Stourbridge, and Wimborne were reached in February, the rural parts of Derbyshire in the third week, of February, and in March the disease was spread in the more thinly peopled portions of Wales.

As further showing the influence of contagion in the fact that persons leading an isolated life escaped. So, many persons escaped altogether although the epidemic was raging in the towns in which they were situated; and in those cases where the disease did occur in prisons, the prisoners suffered much less than the attendants whose intercourse with the town was freer. The same is true of the inhabitants of poorhouses and convents.

The question as to whether infection can be spread by fomites is left undecided. There are many cases recorded which appear to show that this is possible, but none of them are absolutely conclusive.

Great difficulties are experienced in fixing the incubation period of influenza; but many well-observed cases are reported which would seem to prove that this may be very short—under twenty-four hours.

The general opinion of veterinary surgeons is that, although epidemic diseases resembling influenza occur in horses, dogs, and cats, yet that their causation is different to that of human influenza, and that the disease is not communicable from men to animals or from animals to men. There are, however, others who hold the contrary opinion, and believe that the diseases are identical in men and animals, and transmissible from one to the other.

Finally, the author advocates strongly that influenza should, by Act of Parliament, be placed among the infectious diseases for which notification is compulsory.

Clinical Manual for the Study of Medical Cases. Edited by JAMES FINLAYSON, M.D., Physician and Lecturer on Clinical Medicine in the Glasgow Western Infirmary; Physician to the Royal Hospital for Sick Children, Glasgow, &c. Third Edition. London: Smith, Elder, & Co. 1891. Pp. 719.

WE welcome with much pleasure the Third Edition of Dr. Finlayson's Manual. It is, so to speak, the converse of ordinary text-books of medicine, treating, as it does, of the same subjects, but approaching them from the opposite point of view. In books on Practice of Medicine the contents are classified and divided according to the various diseases described. In the Clinical Manual, the different systems and organs of the body are taken as the groundwork, and their condition and functions in health and disease are discussed and explained at length. In a text-book of medicine the student finds an account, say, of bronchitis, with all its signs and symptoms. In the Clinical Manual he reads about the characters of breathing, normal and abnormal, the varieties of cough, the characters of sputum, and the modes of making a microscopic examination of it, of the methods of making a physical examination of the thoracic organs, pulse, urine, &c., &c.

Many matters, too, which are not very fully described in books on medicine, are here fully discussed; there are a number of useful tables showing the average weight and height of children of different ages; there is a chapter on Electrical Instruments in Diagnosis, in which will be found an account of the various kinds of electrical batteries and their appropriate uses; an account is given of the Physiognomy of Disease; and many hints are given which the student will find useful in examining cases.

We consider that the Manual fulfils admirably the author's design—viz., "to aid students in the actual study of their cases, by supplying details of the methods followed in clinical work, along with indications of the significance to be attached to various symptoms." No student, and, we may add, no practitioner who desires to set about his work in a thorough and scientific manner will regret having purchased this volume.

MEDICAL DIARIES AND VISITING LISTS FOR 1892.

1. *The A.B.C. Medical Diary and Visiting List.* 1892. London: Charles Letts & Co., and Burroughs, Wellcome, & Co.
2. *Letts's Medical Diary for the Year* 1892. London: Cassell & Company.

1. Messrs. Burroughs, Wellcome, & Co., have just published their A.B.C. Medical Diary and Visiting List for 1892, which is very similar to the diary issued by that firm for many years past. Columns have been added to the weekly diary, in which the fees due by each patient can be inserted. It is claimed for this addition that it is "important," as enabling the medical practitioner to state at once the amount due and receive payment. To us this addition seems to be of doubtful taste, but perhaps it will work better than we think.

Another improvement in the diary is the pattern of tuck now adopted. The whole of the flap is inserted in the pocket, and so cannot become torn. The edges of the book also cannot be crumpled.

This diary contains considerably less printed matter than the edition of 1891, and so is less bulky and more portable. Forty pages of very tough but thin paper at the beginning of this very neat pocket-book contain an immensity of valuable and wonderfully condensed information, including an index of remedies and a posological table.

2. Letts's Medical Diary is longer but narrower than the A.B.C. Diary. It is equally condensed, but contains a great deal of useful information, notwithstanding. We think the insertion of advertisements in the middle of the pages containing information is a mistake. It makes reference to the contents a matter of some difficulty. On the whole, however, we have to express our hearty approval of this neat and handy diary.

The Ophthalmoscope. A Manual for Students. By GUSTAVUS HARTRIDGE, F.R.C.S., &c. With 63 illustrations. London: J. & A. Churchill. 1891. Pp. 123.

AFTER a careful perusal of this volume we have come to the conclusion that it possesses no special advantages over similar works intended for the same purpose—namely, as a pocket-book of reference for use in the out-patient room. Indeed, we have already questioned the necessity for the existence of such works, in view of the numerous small and portable hand-books on ophthalmology as a whole.

Chapters I., II., and III. are devoted to preliminary optics, the theory and use of the ophthalmoscope, retinoscopy, &c., while the remaining chapters deal with the normal and pathological appearances of the fundus of the eye, including one on the examination of the anterior parts of the eyeball by focal illumination. The latter portion is simply and clearly written; the best chapters, perhaps, being those on the optic nerve and retina. The first part is not so satisfactory, many of the explanations, although obvious to anyone possessing a slight knowledge of optics, are not sufficiently precise and explicit for students. We may take a few instances. One occurs on the very first page. It is stated that "Rays of light diverge—the nearer the source of the rays the more they diverge;" this is evidently not true in an absolute sense, the angle of divergence between any two rays is always the same. What is implied is, that if rays impinge on a given surface, the angle formed by the extreme outer rays is greater the nearer the surface is to the source of light.

On page 7 we read that "the *amount* of refraction is the same for any medium, at the same obliquity, and is called the index of refraction; air is taken as the standard and is called 1." This statement gives a very hazy notion of the real meaning of a refractive index. We could point out several other examples, but the above will suffice. There are also a few instances of omissions—*e.g.*, on page 15 spherical aberration is mentioned without any explanation of its meaning. On page 21 the reason why rays entering the eye return to the source of origin is not given, nor is the reader referred back to it. The movement of the vessels, as seen with the ophthalmoscope, in myopia and hypermetropia is not fully explained.

An appendix which occupies the three last pages gives a *resumé* of the proper routine to be adopted when examining an eye. The book is remarkably free from misprints, but "Galezowski" appears twice as "Galizowski."

Differences in the Nervous Organisation of Man and Woman, Physiological and Pathological. By HARRY CAMPBELL, M.D., B.S. London: H. K. Lewis. 1891. Pp. 383.

THIS most interesting and fascinating work is divided into three parts. The first treats of the evolution of sex. The following is the account of how the sexes came to be separated:—"Suppose that in the evolutionary career of a given species a stage has been reached at which, while the organism still remains hermaphroditic, the female generative system is fairly complex; then given an individual varying in such wise that the female generative system is better developed, and the male generative system not so well developed as in an average member of the class, such an individual will stand a better chance of leaving a numerous progeny than the average member. And, similarly, an organism possessing the male generative system more developed than the female will be at an advantage over others as regards its capacity for fertilising. According to the laws of heredity, as limited by sex, their respective characters will tend to be transmitted respectively to certain individuals among the offspring, some developing more of the female, others more of the male sexual character. It is further evident that those of the offspring in which the sexual disparity is greatest will stand the best chance of leaving a numerous progeny to inherit their sexual peculiarites; and thus it happens that with each generation the female element will become more pronounced in one set of individuals, the male in another, until an element in each organism being finally eliminated altogether the sexes become quite distinct."

As regards the all-important question of the inheritability of somatogenetic characters no decided opinion is given; but the author inclines to agree with Weismann, and to deny such inheritance. That blastogenetic characters are inherited there can be no doubt; but how far these are influenced by the environment is not quite clear. Weismann believes that effects produced by the environment are inheritable, but that the change thus wrought takes no part in evolution. Dr. Campbell, however, maintains that distinct pathological conditions may be thus induced, and that the tendency to disease may thereby accumulate from generation to generation.

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The views of Gidder and Thompson that the male organism is more katabolic and the female organism is more anabolic, that the former is characterised by the expenditure of energy, the latter by the storage of energy, are fully considered, and the contrast is regarded as most important and having considerable pathological significance, although it cannot be taken as expressing the primary and fundamental sexual difference.

In the second part, which is "chiefly concerned with the pathological application of conclusions arrived at in Part I.," we would notice as more than usually interesting the chapters on woman and undeveloped man, and those on the monthly rhythm. In the latter it is argued that a monthly period or cycle is common to both men and women, and that the actual occurrence of the menstrual flux is only one stage of the cycle, just as new or full moon is of the cycle in which the moon completes her orbit around the earth.

The third part is psycho-physiological. In this the chapters on the varieties of male will are of great interest. These varieties are divided into four groups:—

1. The form in which compound mento-motor action tends to approximate to simple mento-motor action.

2. That in which no one impulse to action is able to retain the permanent mastery—*i.e.*, vacillation.

3. That due to the peculiar strength of sense over motion of the nature of a fascination.

4. That in which coherent thought is impossible, the individual being incapable of realising in idea any definite course of action.

The entire work is, of course, mainly speculative, but it is full of ingenious and suggestive matter, and is evidently the outcome of much thought and observation. It is written in a charmingly easy and unaffected style, free from obscurity or pedantry. It is a volume which, if once taken up, will scarcely be laid down until it is finished.

An Introduction to Human Physiology. By AUGUSTUS W. WALLER, M.D. London: Longmans, Green & Co. 1891. Pp. 612.

IN this work we have the latest handbook of Physiology for the use of medical students. It is one to which we can afford the highest praise, and we would say that, in our opinion, it is, for the class for which it is written, the best book on Physiology in the language.

The division of the subject is into two parts. Firstly, the phenomena of Nutrition—including blood and circulation; respiration; digestion; renal excretion and food, nutrition, and excretion; and animal heat.

Secondly, the phenomena of Excitation—including the peripheral nervous system; muscle; animal electricity (treated in a chapter by itself); light and vision; sound and hearing, and the other senses; and the central nervous system.

In an appendix is a short sketch of Embryology, and an outline of physiological chemistry, together with tables of weights and measures.

There is a pretty full bibliography given at the end of the volume, and the copious reference to recent papers will be found most useful by senior students or others wishing to extend their knowledge beyond the limits of a text-book. Finally, there is a good index.

At the head of each chapter is placed a very full table of its contents. This is intended to serve not only as a summary or syllabus, but as a means by which the student can examine himself.

The chapters dealing with difficult subjects, and which may be omitted by the junior student, are marked, so that the selection of parts to be studied in a first reading is easily made.

Throughout, the work is written in a clear, pointed style, free from affectation or obscurity. The facts are accurately stated, and the information is all up to date. The text is abundantly illustrated, not by the histological drawings, which occupy such an undue amount of space in most students' text-books, but by drawings of instruments, curves, and such diagrams and figures as are distinctly physiological rather than anatomical. The type is large and clear, and the paper and binding all that can be desired.

On the whole, this is a work we would strongly recommend to all our readers, who require within a reasonable compass a thoroughly reliable and complete view of modern Physiology. We congratulate Dr. Waller on the production of the volume, which will, we doubt not, add to the deservedly high position which he already holds among contemporary physiologists.

The Human Figure: its Beauties and Defects. By ERNST BRÜCKE, Emeritus Professor of Physiology in the University of Vienna, &c. With a Preface by WILLIAM ANDERSON, Professor of Anatomy to the Royal Academy of Arts, London. With 29 Illustrations by Hermann Paar. London: H. Grevel & Co. 1891. 8vo. Pp. 188.

PROFESSOR BRÜCKE has clothed with anatomical learning Hamlet's famous reflection on man:—"What a piece of work is a man! how noble in reason! how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension how like a god! the beauty of the world! the paragon of animals!" He has added to the poet's enthusiasm of mere beauty the sculptor's knowledge of bone and muscle which brings into prominence every line and curve of physical grace and strength. He has provided for us an anatomical key to the forms and proportions of paintings and statuary which have come to be recognised as embodying the highest point of physical development. The author does not single out as the artistic type that which in many instances anatomy would teach us to be the normal one, but allows to the artist ample scope to avail himself of any slight deviations which may present a more pleasing outline or add to the symmetry and grace of his delineation. We cannot single out the numerous points of interest touched upon by Professor Brücke. Suffice to say it will be found to afford much instruction to those who are not merely students of art, but to all those who care to see the ghastly details revealed by dissection clothed, yet not concealed, by the skill of the painter's brush or of the sculptor's chisel;

to realise Coleridge's ideal of "the sublime of man"—"to know himself, part and proportion of a wondrous whole." A word of praise must be added for the beautiful specimens of wood engraving by Hermann Paar, mostly from well-known sculptures or paintings, which adorn the volume.

Nerve Prostration and other Functional Disorders of Daily Life. By ROBSON ROOSE, M.D., &c. Second Edition. London: H. K. Lewis. 1891. Pp. 671.

FUNCTIONAL disorders, so-called, or as we should say diseases whose real nature is unknown or misunderstood, are the happy hunting ground of therapeutists and speculators. The pursuit only, while it does not contain much that is new or original, gives a plain straightforward account of the symptoms of each of the conditions described without too much theoretical speculation about anabolism and katabolism, and does not unduly multiply the therapeutic agencies to be employed in treatment.

The book will, no doubt, be found useful by many practitioners, although to the scientific physician the effect it produces is not satisfactory.

It is divided into an introduction and four sections. In the introduction it is fairly stated that no sharp line can be drawn between functional and organic diseases, and that many diseases formerly regarded as functional are now known to have an organic basis.

The first section treats of the functional disorder of the nervous system, including neurasthenia, hysteria, epilepsy, neuralgia, headache, hypochondriasis, toxic neuroses, and others.

The second section is on the functional disorders of the organs of circulation, and deals with palpitation, syncope, neurasthenia of the heart, characterised by weakness of the heart with increased excitability, and angina pectoris.

In the third section the functional disorders of the respiratory organs are considered. These include laryngismus stridulus, asthma, and hay fever. It seems rather a straining of terms to call the last a functional disorder.

The fourth section deals with the functional disorders of the organs of digestion. This is, to our mind, the most unsatisfactory section. We find chapters on dyspepsia, nervous dyspepsia, constipation, diarrhœa, and other conditions which are merely symptoms of different and altogether distinct conditions.

There is no doubt that many useful hints may be got from the perusal of this book, although, as we have said, we do not look on it as an example of the highest class of medical literature. The style is clear and easy to read, and the manner in which the work is brought out leaves nothing to desire.

Refraction of the Eye, its Diagnosis and the Correction of its Errors. By A. STANFORD MORTON, M.B., F.R.C.S. Eng. Fourth Edition. H. K. Lewis. 1891.

WE gladly welcome a new edition of this little work on Refraction. As we have had occasion to notice each of the former editions, we need not do more than state that we have no reason now to reduce the large share of praise which we bestowed upon the earlier editions. The book though small, only 69 pages, puts clearly all the most important facts concerning the subject with which it deals. In the present edition the whole book has been revised, and in part re-written, but no very essential change in its arrangement and scope has been made.

We still regard it as one of the very best of the small works on Refraction.

QUASSIN.

SS. OLIVERI and DENARO having obtained quassin in a pure and crystalline state, thus describe it:—Quassin occurs in fine needle-like colourless crystals of the monoclinic order when formed from a warm menstruum. On cooling, the crystals tend to form an amorphous mass, which is very soluble in alcohol, acetic acid, and chloroform, but sparingly so in ether. Exposed to the air, the solution becomes yellowish. The glucoside is neutral in reaction; does not reduce Fehling's solution; gives a white precipitate with tannic acid, and gives no colour test with perchloride of iron. It dissolves in concentrated alkaline solutions, but not in solutions of the carbonates. The chemical is given as $C_{10}H_{22}O_5$, or $C_{32}H_{44}O_{10}$.—*Gazzetta Chimica Italiana*, No. 165, May, 1891. [The chemical formula given above differs from that ascribed to the glucoside by British writers, who give the formula as $C_{10}H_{12}O_3$. Attfield, however, accepts the formula of SS. Oliveri and Denaro].

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—George H. Kidd, M.D., F.R.C.S.I.
General Secretary—W. Thomson, F.R.C.S.I.

SECTION OF OBSTETRICS.

President—Andrew J. Horne, F.R.C.P.I.
Sectional Secretary—W. F. Kidd, M.D.

Friday, November 27, 1891.

Dr. Atthill in the Chair.

President's Address.

The **President** having returned his warmest and best thanks to the Fellows of the Royal Academy of Medicine for having elected him as President of the Section of Obstetrics, read an Address on Cæsarean Section. His firm conviction was that there are many infants annually sacrificed who might be saved if the medical profession would recognise the fact that a majority of such cases could be saved by prompt surgical interference. He gave a short *resumé* of the history of the operation, and did not consider it required more than ordinary surgical skill for its performance. He laid special stress on the treatment of the uterine wound, as advocated by Sänger, of Leipzig, and paid a tribute of respect to Lister, as having restored the Cæsarean section from the limbo to which it was consigned to its proper place in the surgical art, by means of antiseptics. On the early recognition of pelvic deformity depended the success of Cæsarean section.

Specimens Exhibited.

Dr. W. J. Smyly showed specimens of myoma uteri removed from six different patients, which illustrated the chief varieties of such growths.

Case I. was a subperitoneal fibroid with a long pedicle, somewhat larger than a fœtal head. It had been removed from a patient in the sixth month of pregnancy. The pedicle was transfixed and secured with a Staffordshire knot, and the peritoneum stitched over the raw surface. Patient recovered.

Case II. was also a subperitoneal myoma, but senile. The primary object of the abdominal section was the removal of a large multilocular ovarian tumour, but the myoma, which was as large as a closed fist, was wedged down in Douglas' pouch, and was causing pressure-symptoms, and was therefore removed at the same time. An elastic ligature was placed below the tumour, which was removed by a wedge-shaped incision, and the edges brought together by suture. The patient died from pulmonary embolism on the third day.

In the next three cases the uterus was removed by supra-vaginal amputation, the stump being treated extra-peritoneally.

Case III. first came under observation three years ago with a sloughing fibrous polypus in the vagina, but she absolutely refused to have it removed. Six months later, however, this was accomplished by another operator, but she nearly lost her life from pyæmia. She recovered, however, but was subsequently attacked with diphtheria, followed by paralysis of the soft palate. The abdomen had then enlarged to the size of a full-time pregnancy. In July of the present year (1891) she came into the Rotunda Hospital in a deplorable condition; the uterus reached to a handsbreadth above the umbilicus. and a sloughing polypus occupied the vagina and protruded from the vulva, causing painful expulsive efforts and a most offensive discharge. She was greatly reduced by hæmorrhage, septic fever, and morphia. Her temperature was 104° F. The day following her admission the polypus, which weighed 1½ lbs., was removed, but as her temperature continued high the uterus was also removed two days after. The operation was rendered very difficult by firm peritoneal adhesions, and the ovaries, which were as large as hen's eggs, were crossed behind the uterus embedded in inflammatory exudation, and filled with pus. The ovaries having been removed, the uterus was drawn out and the abdominal wound closed and thoroughly protected before it was amputated. The stump was well cauterised with the actual cautery and dressed with tannic and salicylic acids. The patient made an afebrile recovery.

Cases IV. and V. were intra-mural myomata. The first multinodular, the second of the soft uninodular variety; both made good recoveries.

Case VI. was a myoma the size of an ostrich-egg, which had developed at the back of the uterus in the cellular tissue beneath the peritoneum, and had caused so much distress as to necessitate its removal. When the tumour was exposed the peritoneum covering it was laid open by a crucial incision and the growth enucleated. The cavity was drained through tho vagina, and the peritoneum closed over it by continuous catgut suture, so as to exclude it completely from the peritoneal cavity. This patient also made an uninterrupted recovery.

Mr. M'Ardle asked Dr. Smyly if catch forceps were used during the efforts at securing the pedicle of the ovarian tumour, as the contusion of the veins thus brought about might account for the pulmonary embolism which caused death. Mr. M'Ardle had frequently seen the femoral and axillary veins so contused by forceps that clotting occurred at the points of pressure, owing to injury of the inner wall. Possibly compression of the stump caused in this case pelvic phlebitis, otherwise it is difficult to account for the result.

Dr. Smyly replied that catch forceps had not been used, but that the pedicle had not been compressed with catch forceps, but by the elastic ligature.

Dr. Lane exhibited a pin about two inches in length, which he had removed from the bladder of a young lady. Patient was seen on the day the pin escaped into bladder, and was with ease felt by examination per vaginam. The head was resting against posterior wall of bladder and to right of uterus, the point being directed forwards and to left side of orifice of urethra. Owing to certain reasons, the attempt to remove the pin had to be postponed for three days, and when patient was under ether the pin was found to be lying transversely and some distance above the inner orifice of urethra. Previous to any examination, vagina was washed out, and prior to attempting to remove pin the bladder was injected with water. The pin was caught and withdrawn. There was a very slight amount of blood in urine that day; none afterwards, but urine was turbid. On fifth day patient got a severe rigor and got pyelitis of both kidneys. Cause not quite certain, as temperature and pulse had been perfect, unless it was due to cold, as patient had the day previously been sitting up in bed at an open window, without much covering. Symptoms gradually subsided, and patient made a perfect recovery.

Dr. More Madden was certain that the Academy would appreciate the intent of Dr. Lane's communication both as regards the comparative rarity of the accident described and the efficacy of the treatment adopted in the case just referred to. The bladder has in many instances been found the receptacle for a most extraordinary and heterogeneous assortment of misplaced articles, an occurrence of which several instances were long since related by the late Sir Benjamin Brodie, as well as by Sir Philip Crampton, and more recently by Dr. Barton, of this city. Dr. More Madden on a former occasion had exhibited a piece of slate-pencil which he removed from the bladder of a young female.

Two Cases of Cæsarean Section.

Dr. W. J. Smyly said—I have the honour of exhibiting to you two patients with their infants, upon whom I performed the operation of Cæsarean section in the Rotunda Hospital. They present one feature only in common—namely, such an extreme degree of pelvic deformity that the birth of a living child by any other method than abdominal section would be impossible. In other respects they present marked contrasts. The one is a well-marked example of a rare deformity, the result of a kyphosis in the lower lumbar and upper sacral regions of the spine, in which the narrowing is most marked in the transverse diameters, and especially at the pelvic outlet. The other is an example of the generally contracted flat rachitic pelvis, in which the narrowing is most marked in the conjugate diameters, and especially at the pelvic brim.

Case I.—Mrs. H., aged thirty, was sent to the Rotunda Hospital by Dr. Alfred Smith, of St. Vincent's Hospital, when in the fourth month of her second pregnancy. Her first child had been delivered with the perforator and cranioclast in the hospital in 1889. The patient was of small stature, 4 feet 5 inches in height, with a well-marked kyphosis in the lumbar region. She was so much bent forwards that the thorax was overlapped by the wings of the ilia. She had no recollection of the illness which produced this deformity, but her mother had informed her that she had been treated for spinal disease in St. Vincent's Hospital when an infant. The alæ of the ilia were flattened outwards, the distance between the anterior superior spinous processes being 26 cm., and the most distant parts of the crests 28 cm. The symphysis pubis protruded in a beak-like process resembling that of a cordiform pelvis, and there was marked narrowing of the pubic arch. There was considerable narrowing of the outlet, especially of its transverse diameter, the ischial tuberosities being approximated to within 5 cm. (2 inches) of each other; the promontory of the sacrum was out of reach. After consultation with my assistant, we informed the patient that a living child could only be obtained by abdominal section, and to this she readily assented.

Labour set in at full term on Sunday, the 7th of June, and I proceeded to operation about ten o'clock in the morning. She had then been some hours in labour, and the os was about two-thirds dilated; the head was well down in the pelvis, but the membranes were unruptured. The abdomen having been opened by a free incision, the uterus was drawn out, and an elastic ligature placed around the cervix. It was then opened, the membranes sutured, and the fœtus extracted. The placenta and membranes having been carefully removed, the interior of the uterus was well scrubbed with a strong solution of carbolic acid. Although I adopted this precaution in both my cases, I now think it had better be omitted, because the interior of the uterus is—except under exceptional circumstances—quite aseptic, and the process occupies time and depresses the tissues, so as to render them more liable to a later infection; and I find that, in Dr. Murdoch Cameron's cases, although it was omitted, the results were eminently satisfactory. The patient made an afebrile recovery, and nursed her infant.

Case II.—Mrs. G., aged twenty-four; a primipara; had evidently suffered from rickets in early infancy. The shape of her head and thorax, her large joints and bow-legs, as well as the pelvic deformity, testifying to the fact. The distance of the anterior superior spinous processes of the iliac crests was 22½ cm., and the most distant points of the crests 23 cm. The true conjugate of the brim was only 6 cm. (2¼ inches). When I was called to the patient she had been forty-eight hours in labour, and violent efforts had been made to deliver with forceps. Under these conditions I was at first disposed to resort to the perforator, as such misdirected efforts greatly diminish the prospects of success in abdominal section; but considering that strict antiseptic precautions had been maintained throughout, and that the fœtal heart was beating strong and regularly, I came to the conclusion that the more conservative proceeding was still justifiable. I then performed Cæsarean section as in the former case. After extraction a deep scalp wound was found on the child's head, and another contused wound upon its neck, resulting from the pressure of the forceps, both of which suppurated, and have left permanent scars. The mother's convalescence was retarded by suppuration, a large quantity of pus escaping from the lower end of the wound when the sutures were removed on the eighth day, It healed, however, by granulation, and she left the hospital with only a small sinus remaining, which ultimately closed after the discharge of three sutures.

Dr. More Madden.—No subject of greater practical importance could probably be brought before this Section of the Academy than that which has been introduced by the President's Address and in Dr. Smyly's paper. The advance of modern midwifery has been most strikingly exemplified in the changed position in obstetrics in favour of craniotomy and Cæsarean section. Five and twenty years ago the former was invariably resorted to in those cases of difficult or obstructed labour, in which a living child might now be delivered from a living mother with safety to both. Dr. Murdoch Cameron, of Glasgow, as well as Dr. Smyly and others, had abundantly demonstrated the possibility, and with due precautions the safety in proper cases, of the Cæsarean section. The necessity for choosing between craniotomy on the one hand, and Cæsarean section on the other, does not, however, so often actually arrive as some may suppose. In twenty years' midwifery experience Dr. More Madden had never met with any case justifying resort to craniotomy, and in only one instance had he found Cæsarean section necessary. It is a great satisfaction to one who like himself had long maintained that opinion, to find that most of the leading obstetricians of the present day now probably agreed that child-destroying operations should be eliminated from midwifery practice, and that the only question, in extreme cases of difficult labour, should be which one of the two suggested child-saving operations—viz., Cæsarean section or Porro's operation, should be resorted to.

Dystocia due to a Cyst in the Liver of a Fœtus.

Dr. Bagot read a paper on "A Case of Distocia due to a Cyst in the Liver of a Fœtus." He considered the case of extreme interest from a pathological as well as from an obstetrical point of view. Records of cases where congenital cysts of any size had been found in the liver were very rare, as were also records of such, or indeed any, tumour of the fœtal liver causing dystocia.

The history of the case from which this specimen had been taken was as follows:—As Senior Assistant Physician to the Rotunda Hospital he was summoned to the assistance of two of the students of the hospital who were in attendance on a woman in the extern maternity department. It was her second pregnancy. Her first had terminated normally and at full term. She had been in labour thirteen hours. The head of the child had been born immediately on the arrival of the students; but the body was delayed, and though they had tried both expression and traction they were unable to deliver it. Dr. Bagot accordingly went to their assistance, and found, as they had reported, the head somewhat smaller than normal, completely born, and the child apparently dead some little time. The woman stated that she was about 8½ months pregnant. Her body was covered with a papular rash, apparently syphilitic. Dr. Bagot then administered chloroform, and proceeded to palpate her abdomen. He found the uterus much larger, and more tense than was usual at full term, though some of the liquor amnii must have escaped on the rupture of the membranes. On percussion a very distinct fluctuation thrill could be felt.

The back of the child could with difficulty be mapped out, looking forward, and towards the left in the first position. It at once occurred to Dr. Bagot that he had to deal with a case of Hydrops Amnii, complicated by some abnormality of the fœtal abdomen, such as ascites or an ovarium tumour, &c. Accordingly, after a thorough disinfection, he passed his hand up posteriorly along the anterior surface of the child, and on reaching the uterine cavity, which still contained an abnormally large quantity of liquor amnii, he found, in accordance with his expectations, that the abdomen of the fœtus was enormously distended. He perforated the child's abdomen close to the xiphoid cartilage by means of a Smellie's scissors, upon which a yellow fluid poured out, mixed with the liquor amnii, which then came freely away. The child, a male, was then easily delivered, the placenta following almost immediately. After stitching up the hole made by the perforation, Dr. Bagot injected the abdomen till it almost assumed its original tension, and found that its capacity was 60 oz.

He then made the following measurements:—Length of fœtus, 45 cm.; girth of umbilicus, 59·75 cm.; distance from sternum to pubes, 39·5 cm.

On opening the abdomen he found that the chief abnormality existed in the liver. The other organs, with the exception of the kidneys, which were very small, were apparently normal, as far as could be made out from a hurried examination of them *in situ*; for the father having returned, demanded the restitution of the body without any further examination. Dr. Bagot, however, succeeded in removing the abnormal viscera for examination, which showed the following:—

Liver.—Right Lobe comparatively normal; perhaps rather small for a full-term fœtus. On its under-surface near the right edge was a small lobe marked with parallel ridges. The gall bladder was absent, and the lobus quadratus consequently not marked off. Hepatic artery and vena portæ normal. Hepatic duct present, rather small. It was not possible to trace a branch to the left lobe with any certainty, but it was probable that the left duct had been torn from its connections on account of the haste with which the autopsy had to be made. The duodenal end of the duct was not observed.

Left Lobe.—The whole left lobe was converted into a large simple cyst capable of holding 48 ounces of fluid. It was smooth on its surface and marked by ramifications of vessels and ducts. The inner surface was also smooth, except that it was covered by a whitish film which could easily be stripped off. The fluid from the cyst having all drained away at the time of perforation could not be examined. Histologically the hepatic tissue was normal. The wall of the cyst was formed of two layers of about equal thickness. One next the cavity of the cyst consisted of a rather dense fibrous connective tissue; and outside this, over the greater part of the cyst wall, a layer of equal thickness, consisting of hepatic tissue. Where this was absent, its place was taken by large vessels and ducts. Near the junction of the two layers numerous small ducts were to be seen. In no case at all did these approach the cavity of the cyst, but opened into the larger ducts mentioned above as accompanying the vessels.

No epithelium could be demonstrated on the interior of the cyst. The kidneys, though very small, were normal in structure. Dr. Bagot had been able to find records of two cases only, which in many points resembled his. The first, reported by Witzel (*Centralblatt fur Gynäkologie*, No. 24, 1880) as a case of dystocia, due to a hemicephalous fœtus, with large cystic liver, cystic kidneys, and other malformations. It was easily delivered after perforation of the abdomen. The second case, reported by Lomer (*Virchow's Archiv*, No. 99), Dr. Bagot thought worthy of notice, from the fact that it occurred in a syphilitic child. It did not, however, cause any delay in the labour. In it the following abnormalities were present:—Obliteration of cystic and right hepatic ducts, gall-bladder collapsed and obliterated, left lobe normal, right lobe rough, convoluted, and degenerated, with cyst in it. The fœtus was macerated, and its bones presented syphilitic lesions. Lomer considered it either primary developmental defect, or else due to syphilitic perihepatitis.

Dr. Bagot had been able to find only four cases, besides that recorded by Witzel, where dystocia had been caused by any form of liver tumour—viz., (1) Haase (N. Z. XI., 262); (2) Müller (Hohl, p. 286); (3) Naggereth (Deutsche Klinik, 1854, No. 44; Wochenschr. IV., 458); (4) Schlesinger (Hohl, p. 289). The first three, according to Winchel, "resolve themselves into either hepatic physconia, or a lymphatic tumour of the liver." The tumour in Naggereth's case was a carcinoma.

SECTION OF PATHOLOGY.

President—C. J. Nixon, M.D.
Sectional Secretary—J. B. Story, F.R.C.S.I.

Friday, December 4, 1891.

The President in the Chair.

United Fractures in Animals.

Dr. Frazer showed:—No. 1.—Humerus of grouse, broken at lower part and united with much angular deformity and overlapping of lower fragment.

No. 2.—Wing of pheasant. Radius broken at lower third; much consolidation around seat of fracture, with spiny protuberances from callus.

No. 3.—Pintail duck. Fracture of both wing bones radius, and ulna, with overlapping

No. 4.—Fracture of leg of hare, with considerable oblique displacement of the lower fragments.

These injuries, probably all due to gunshot wounds (though possibly the broken leg of hare may have resulted from some other cause), appear worth exhibiting as illustrations of the remarkable powers of healing without surgical aid or the benefits of antiseptic treatment they evince in their former owners. In every instance the union of the injured bones has resulted in a useful limb, capable of flight or locomotion.

Specimen of Intussusception of the Dying.

Dr. M'Hugh exhibited a case in which descending intussusception of the jejunum had occurred in two places. In neither of the suscepta was there any trace of inflammatory reaction or adhesion, and both were readily reducible. The specimen was found by the exhibitor in the Dissecting Room of the College of Surgeons in a male adult subject, which was, however, already in an advanced stage of dissection. The thoracic organs had been entirely removed, and the cause of death was not ascertainable. The intestine itself presented no signs of disease, and there was no intussusception of the ilieo-cæcal valve. The case was clearly one of what is very commonly called *post-mortem* intussusception, or, more properly, intussusception of the dying, as the invaginations might be supposed to have taken place whilst the patient was *in articulo mortis.* The condition is comparatively frequently copied in autopsies of children, but as far as the exhibitor was aware was infrequent in adults. The fact that both invaginations were high up in the jejunum and descending in direction was noticeable.

DR. FRAZER mentioned that he had seen about four instances of similar intussusceptions. In one case at least four invaginations occurred. There were no symptoms during life to attract notice, and no evidences of inflammatory deposit apparent; they appeared due to irregular action of the muscular fibres, before complete extinction of movement in the dying person.

DR. M'WEENEY mentioned two similar cases which he had lately met with in the *post-mortem* room of the Mater Misericordiæ Hospital. They were both adults; both had died of lingering disease—one of valvular disease of the heart, and the other of pleural effusion. In neither was there any symptom indicating intussusception noticed during life; and in neither was there any reaction in the shape of either congestion or inflammation observed *post-mortem.* Orth, in his work on pathological anatomy, states that these agonal intussusceptions are met with very frequently in children who have suddenly died of brain lesions. The observations laid before the Section that evening would go to show that it was not uncommonly found in adults dying of other affections.

Fibro-sarcoma of Neck of Hen.

MR. PATTESON showed a specimen obtained from a fowl in whom the growth had been present for about a year. The tumour was about the size of a large walnut, lying in front of the windpipe, and firmly adherent to the overlying skin. It had been at one period very vascular, and bled freely when pecked at by the other fowl. The growth apparently originated in the subcutaneous tissue of the neck, and though growing backwards and involving the muscular structures, did not give rise to any pressure symptoms in the trachea or œsophagus. On section it was found to be extremely dense in consistence and of light yellowish colour, and microscopic examination showed that it was composed of very thick bundles of fibrous tissue, in the interspaces of which collections of small round cells of embryonic type were freely scattered. Its local malignancy was shown by the invasion of the muscular bundles by a small-celled sarcomatous infiltration. The appearances very closely resemble those seen in the drawing in Mr. Bland Sutton's "Evolution and Disease" of a sarcoma in a fowl (p. 237).

SECTION OF SURGERY.

President—H. G. Croly, President of the Royal College of Surgeons in Ireland.

Sectional Secretary—R. L. Swan, F.R.C.S.I.

Friday, December 11, 1891.

The President in the Chair.

Some Cases of Artificial Anus.

Mr. Thomson read a paper on the above subject. In three case he had opened the ileum for acute obstruction, and in five the colon by anterior incision, for malignant disease. Of the former group two died, and in the second group all recovered. He pointed out that the cause of the greater mortality in so-called enterotomies was largely to be attributed to the fact that these operations were usually done in acute obstruction, so that the shock of operation was added to a profound shock already existing. In two cases he had opened the colon some days after it had been fixed in the wound, and he advocated this method where feasible. In one case he had fixed the colon by transfixing its ligament with a pin, which lay transverse to the wound, upon the abdominal wall. This operation only occupied a few minutes. He pointed out that the colon was not always readily found, but he held that the balance of advantages lay with the anterior as compared with the lumbar operation.

Mr. Thornley Stoker expressed himself strongly in favour of the anterior operation, which for nearly every reason he conceived to be the logical one, and with due precaution, and in spite of statistics, not more immediately dangerous. He also argued in favour of the performance of colotomy in cases of cancer of the rectum as early as possible, and that the procedure should not be delayed until malignant obstruction had taken place. He stated that while it was desirable to draw the bowel thoroughly into the wound and secure it there, by the pin passed through the mesentery, as suggested by Mr. Thomson, or otherwise, he held this point as one of minor importance. It is sometimes difficult to perform this manœuvre owing to a short or fat mesentery, and it really does not matter much, as the distal lumen of the bowel always contracts, and it is found that even in cases where fluid can be injected from the rectum through the artificial anus, fæces do not pass in the opposite direction. Mr. Thornley Stoker also mentioned that he had of late adopted the practice in laparo-colotomy of securing the bowel in such a position that its distal portion is secured at the upper end of the abdominal wound and its proximal part at the lower end of the wound. When this can be done without twisting the gut—and it can generally be so done where the convoluted sigmoid flexure is the seat of operation—the effect is to make a sort of *cul-de-sac* on the proximal side of the anus in which fæces become stored and are retained by gravitation. The fæces are then more likely to adopt the method of a periodic overflow and to avoid the more constant discharge which is often so troublesome, and which is more likely to occur when from the superior position of the proximal part of the bowel gravitation helps the continual discharge. This point he considered a novel one, and by attention to it he had added materially to the comfort of those patients in whom he had been enabled to practise it. He stated that this practice should only be pursued where it could be carried out by placing the bowel in the requisite position without any kink or twist.

Mr. Myles congratulated Mr. Thomson on the success of his cases, and commenting on them expressed some regret that Mr. Thomson had not said anything of the operation as an antecedent to the operation of rectal excision. Mr. Myles then mentioned a very successful case in which he had assisted Mr. Dwyer at Jervis-street Hospital to remove the rectum subsequently to a colotomy. Referring to Mr. Thornley Stoker's suggestion to turn the gut upside down so as to have a pouch below the aperture, he stated, in every case where the mesentery was of normal length, that part of the colon which lay between the descending colon and the new aperture descended into the pelvis so as to make a fairly effective pouch. Mr. Myles commended the use of the pin, asserting that no other method yet devised was as efficient in producing a valve so as to completely occlude the lower aperture of the bowel and prevent irritation of the cancerous sore in the rectum.

The **President** said he had performed colotomy in 15 cases by the lumbar method. No special difficulty in finding the bowel or trouble from the peritoneum. Two deaths. Several of the cases lived a year. One case was at work as Corporation labourer at end of two years; no fœtor. Posterior aspect more natural than anterior. No excoriation of skin. Early operation important. Early examination of bowel with finger most important. In all cases of rectal trouble the rectum should be explored with the finger. He operated on one case which had been treated by a physician as one of dysentery before she came to the City of Dublin Hospital. Early colotomy stays the progress of the disease.

Mr. Wheeler had performed both anterior and lumbar colotomy. He gave the preference to the latter.

Mr. Thomson, in reply, said he agreed with Mr. Thornley Stoker that the pin was not available in all cases. He had stated this in his paper. If the mesentery were too short to allow the bowel to be brought outside the wound, the pin ought not to be used; but where a suitable case presented, the pin was undoubtedly most simple and convenient. He thought the four sutures which he used in addition were not necessary; but this was the first time he had used the pin, and he confessed that he was a little timid, and he wished to make assurance doubly sure. He had not dealt with the question of excision of the rectum in relation to colotomy, because that was a subject somewhat foreign to his paper, but it might be discussed on a future occasion. The President and Mr. Wheeler were in favour of the lumbar operation. He (Mr. Thomson) had admitted that there were some cases which were suitable for that operation; but he still held that the balance of advantage lay with the anterior method. It was certainly more convenient for the patient, who had to attend to himself, to have the opening in front, where it could be seen, and where any possible changes could be observed.

Nephro-Lithotomy.

Mr. Myles read an interesting paper on nephro-lithotomy, giving a short account of a case in which he had removed by lumbar operation a large oxalate of lime calculus weighing 281 grains from the kidney of a young man in Jervis-street Hospital. The patient made an uninterrupted recovery, and was shown at a previous meeting of the Section.

Mr. Myles then entered into the consideration of the combined method so strongly advocated by Mr. Thornton, and pointed out that Mr. Thornton's contention that an abdominal incision converted doubt into certainty of diagnosis was by no means true, inasmuch as even in a typical case the hand in the abdomen might fail to find a stone in the kidney; and that being so in a typical case, how much more likely was it to occur in case of old standing inflammation with much thickening and matting of the tissues.

Again, the hand in the abdomen would often fail to find a stone, which could, perhaps, be easily struck by an exploring needle or by a sound in the pelvis.

Mr. Myles also discussed the several methods of removing a stone from the kidney when it was discovered that by incision through the pelvis of the ureter and that by incision through the kidney substance, pointing out that probably the danger of a permanent fistula in the one case and of shock and hæmorrhage in the other, were both exaggerated.

The speaker further expressed himself very strongly on the loose and unscientific way in which writers, even accomplished anatomists like Mr. Treves, use anatomical terms in connection with the kidney—at one moment describing the pelvis, correctly enough, as being part of the ureter, and then describing themselves as cutting through the "pelvis of the kidney." Such looseness of language was most misleading.

Mr. Wheeler said that he had performed nephrectomy on several occasions, but the communication only invited remarks upon nephrolithotomy. He had shown calculi removed from the kidney of different individuals at this Society. He did not think that the abdomino-lumbar operation was necessary should the operator be quite certain that only a calculus existed, and that further operative measures would be unnecessary. He was of opinion that it did afford some help in diagnosis; but the combined operation had other advantages. In one of his cases there was much difficulty in detecting the stone—a small one—and he had to puncture the kidney seven or eight times before the needle impinged upon it. He then incised the kidney with a narrow-bladed knife and dilated with his finger. There was no hæmorrhage. The wound healed kindly. A tube was introduced as far as the site of the wound in the kidney. He had not found it necessary to sound the kidney with a staff. The so-called pelvic incisions should be made with caution. In one of his cases the fat was very abundant; he applied a ligature and cut it off. In cases of abscess he introduced the tube into the kidney.

The **President** said, with reference to the difficulty of detecting the stone in the kidney by manipulation, he mentioned a case in which he operated by the abdominal incision, and though he expected stone, it was not discovered until the kidney was removed and a section made of the viscus. A large stone was discovered. There was a large abscess. No renal artery could be found. No urine was secreted from the time of operation, and the patient died the night of operation. He made an examination of the remaining kidney, *post mortem*, and found a large stone in it also. This case shows the difficulty of detecting stone before operation, and of knowing the state of the other kidney.

Mr. **Myles** having replied,

The Section adjourned.

SECTION OF MEDICINE.

President—J. **Magee Finny**, M.D.; President of the Royal College of Physicians of Ireland.

Sectional Secretary—A. N. **Montgomery**, M.R.C.P.I.

Friday, December 18, 1891.

Dr. Atthill in the Chair.

Ichthyosis.

Dr. J. O'Carroll exhibited a case of ichthyosis.

Card Specimen.

Dr. M. A. Boyd showed as a card specimen the intestines, with perforation, from a case of enteric fever.

Some Recent Aids to the Diagnosis and Treatment of Diseases of the Stomach.

Dr. H. C. Tweedy, in a paper on Recent Aids to the Diagnosis of Diseases of the Stomach, referred to the very valuable researches of Professor Purser on the processes of digestion which he had communicated to the Academy last Session. The first mode of physical examination to which Dr. Tweedy drew attention was the "clapotement" or splashing sound; its utility was not confined to the help it might give in determining the position and size of the organ, but what was of perhaps more importance—it could give information as to the condition of the muscular layer. It was easily elicited in the epigastric region, and could, from the convexity of the lower boundary of the region in which it is audible, be differentiated from similar sounds occasionally heard in the transverse colon. Referring to another mode of examination, Dr. Tweedy records his objection to the proposal of testing the size of the stomach by the evolution within the organ of carbonic acid: the proceeding was uncertain, unreliable, and sometimes not devoid of danger. He considers this procedure, as well as that of introducing a small electric light, to be entirely superseded by insufflation, which, with obvious precautions, is both safe and satisfactory.

After referring to various contrivances for obtaining specimens of the contents of the stomach for examination, he unhesitatingly adopts the ingenious "bucket" of Dr. Einhorn, of New York; and he details the *modus operandi* whereby it can be used without causing the patient inconvenience. To guard the little receptacle against an undue proportion of mucus, he covers the open top with a film of gelatine, which will not melt till it has been a few minutes at its furthest destination. By this means the presence and amount of free hydrochloric acid and of other substances could be determined.

The question whether the percutaneous application of electricity to the abdominal walls determines peristalsis of the stomach directly or only as an effect of contraction of abdominal muscle is next discussed. The author of the paper evidently inclines to the latter view, as he describes and recommends the application of a new form of electrode devised by the inventor of the "bucket" mentioned above. It is claimed for it that it is easy to place and retain in the stomach, and perfectly under control of the operator.

Mr. George Foy said that the disadvantages of Einhorn's bucket were—(1) It may be stopped by disease of the œsophagus and prevented from entering the stomach; (2) its contents may have been got in the œsophagus; (3) it will probably empty itself in the mouth; (4) it is inferior to the Abbé Spallanzini's metal capsules; and being modelled on the Abbé's capsule, Einhorn is not entitled to credit for its introduction.

Dr. M. A. Boyd considered that the splash symptom mentioned by Dr.

Tweedy was of all symptoms the most reliable in all forms of dilatation of the stomach, both functional and organic. That it is a common symptom in a great many of the catarrhs of the stomach which are known as dyspepsias. Functional dilatation accompanied by this symptom is a very common affection, and will be found if looked for in most cases of anæmia or chlorosis, with the characteristic left-sided pain, even where no gastric ulceration is present. Also where the ingesta of injudicious food and much fluids lead to fermentation and distension of the muscle-wall of the stomach. Distension of the stomach from an atonic condition of its muscle, is not uncommon after long illnesses. In all these cases the splash symptom is present. In organic stricture of the pylorus from either malignant disease, contracting gastric ulcer, or fibroid induration, the most characteristic symptoms of dilatation are met with, and the splash symptom most easily obtained. When dilated from organic stricture, all portions of the stomach are stretched. In functional dilatation the only part distended is the cardiac end where the muscular tissue is most abundant, showing that muscular atony in addition to the weight of fluid ingesta are the most important factors in its causation. He regarded the splash as always indicative of some abnormal condition of the stomach.

Dr. Tweedy remarked in reply—first to Mr. Foy, that however valuable might have been the discovery of the Abbé Spallanzini, 200 years ago, in obtaining by a sponge the contents of the stomach, the contents so obtained would have been of little service to him, as the diagnostic value of chemical examinations dated practically within the last ten years. He added that from *personal* experience he could state that the introduction of Dr. Einhorn's stomach bucket was attended with little or no inconvenience; and that it was not likely to empty its contents on withdrawal from the stomach, both in consequence of the consistence of the alimentary matters withdrawn, and of the small size of the opening in the bucket; but even if some of the contents escaped, one drop was sufficient for the performance of the test for hydrochloric acid with Günzburg's phloroglucin-vanillin solution. Another objection mentioned was anticipated by Dr. Einhorn, in providing a gelatine capsule for the stomach bucket, where there was a superabundance of œsophageal mucus. In the descent to the stomach no mucus could enter the bucket in consequence of the gelatine covering, and as the bucket is full when withdrawn it is impossible that any amount of mucus could displace the stomach-contents already in the instrument.

Acute Double Pneumonia successfully treated by Bleeding and Inhalation of Oxygen.

Mr. Foy read a paper on the above subject. [It will be found at page 13.]

Dr. M. A. Boyd said he was glad to hear attention called by Mr. Foy to a remedy in pulmonary congestion which we did not try in such cases as often as we might. He (Dr Boyd) had only a limited experience of oxygen in lung cases, but he had tried it and considered it a most valuable remedy in disease of the heart with degeneration. He brought forward during last Session of the Academy a case of Cheyne-Stokes' respiration with degeneration of the heart, where the improvement following the inhalation of oxygen was most remarkable, the degenerated heart strengthening and the dyspnœa disappearing after it was used for some time.

Dr. C. F. Moore and the **Chairman** having also spoken,

Mr. Foy, in reply, drew attention to the discussion in the past on the side on which pneumonic patients should be bled—Sydenham's love of bleeding in pneumonia, and Cullen's classification of bleeding—the use of oxygen in Dublin at the beginning of the century, and Dr. Reid's paper on the value of the gas in 1817—the case of General Philip Sheridan.

Some Recent Modifications in our Views of Enteric Fever and its Treatment.

Dr. M. A. Boyd read a paper on some recent modifications in our views of enteric fever and its treatment, in which he regarded Murchison's classic treatise on the disease as having foreshadowed all that bacteriology has since discovered regarding it. The discovery of the typhoid bacillus by Koch and Eberth had, however, narrowed the issues and enabled us to regard the disease as an acute infective one, in which light it was not previously considered. Since that discovery was made our views as to the ætiology of the disease have considerably changed, and the time had come when taking advantage of it and of the life-history of the bacillus, with its more general growth in the autumn and its prevalence during this season in drinking water and milk, as pointed out by Gaffky, to consider the manner in which it infected the intestinal glands, and to suggest some rational means for its treatment. Alluding to the want of evidence of its infective character, by its not producing the characteristic disease after inoculation experiments, Dr. Boyd pointed out that these were performed from its ærobic cultivation, but that it existed in the intestines as an anærobic bacillus, and in the former condition it might be incapable of infecting, and yet capable of doing so in its latter condition. That we were constantly taking this bacillus into our intestines by water or other media there could be no doubt, and further experiments showed that it was identical with the Bacterium termo which was a constant resident there. Why, then, were not all infected by it? The answer to this question lay in the fact that all bacilli were harmless until they overcome the vital resistance of the blood and tissues, in some situation weakened by injury or disease, and by growing on this weakened part produced the ptomains or toxins which poisoned the blood. This fact, numerous bacteriological experiments had proved. Alluding to its prevalence in the autumn, he pointed out that the constant occurrence of intestinal catarrh and gastric troubles at this period produced that amount of epithelial proliferation and lowering of the vital resistance in the intestines favourable to the invasion of the bacilli.

That this intestinal catarrh was a constant precursor and accompaniment of the disease was long ago pointed out by Murchison. Added to this, the increased growth of the bacillus on the fermenting intestinal contents, resulting from this proliferation, and the generation of their chemical toxin during growth, made the intestinal glands—always easily choked like all adenoid tissue when attacked by bacilli—fall an easy prey.

This infiltration of the glands of the intestine by the typhoid bacillus runs its course in the first fortnight of the disease from the onset of fever, and this was the normal length of typhoid from the pathological point of view. Pus-producing micrococci now invade the necrotic tissue, and from this period forward the disease is only one of septicæmia due to the toxins they produce. The character of the typhoid temperature after the second week shows this to be the case.

We must therefore regard two forms of bacteria as playing a part in the course of enteric fever—the typhoid bacillus in the early stage and the suppurative micrococci in the latter stages. This fact suggested antiseptics as the most rational method of treatment in addition to suitable diet.

The gaseous form of antiseptics seemed to him the most thorough and suitable, as it permeated the tissues and entered the blood; and of these chlorine gas held first place, administered in some alkaline medium that would part with it readily in the intestines. One-fourth of the cases treated in this manner ended their fever on the fourteenth to the sixteenth day—a result which could not be achieved by any other method.

A resolution that the discussion on Dr. Boyd's paper should be postponed until the next meeting having been proposed by Dr. N. Falkiner, seconded by Dr. C. F. Moore, and carried,

The Section then adjourned.

CLINICAL RECORDS.

Notes on Uncommon Forms of Skin Diseases.[a] By R. Glasgow Patteson, M.B., Univ. Dubl.; Fellow and Member of Court of Examiners, Royal College of Surgeons in Ireland; Surgeon in Charge of the Skin Department, St. Vincent's Hospital, Dublin.

VI. SYMMETRICAL GANGRENE OF THE EXTREMITIES ("RAYNAUD'S DISEASE").

The affection of the extremities—feet, hands, ears, and tip of nose—which goes by the name of Raynaud, is still sufficiently obscure in its pathology to allow us to group it, provisionally, at least, along with those cutaneous affections which are characterised by the phenomena of necrosis; and as the features which first led to its recognition as a morbid entity are those of a limited and usually superficial gangrene affecting the most peripheral parts of the body, we may be allowed to consider it here under the heading of rarer forms of skin disease.

Case.—Mary W., aged twenty-two, a parlourmaid, came to St. Vincent's Dispensary on the 22nd of October, complaining of a "deadness in her hands." Exactly twelve months previously she first began to suffer from "dead fingers," and up to that time her health had been fairly good. She had had one or two slight attacks of bronchitis, and five years previously had suffered from an attack of rheumatism lasting six weeks, which she believed to be rheumatic fever, but which, at any rate, had left no appreciable heart damage. About a fortnight before the first attack of numbness of the fingers came on, she received a severe shock, being left alone in the house at night and fancying she heard it being broken into by burglars. She was very nervous and felt out of sorts for about a week, but afterwards felt as well as before. At this time she was suffering from some menstrual irregularities—at first amenorrhœa, and afterwards too frequent periods with very scanty discharge—which continued for about six months, when she went under medical treatment, and has since been practically well. The history of the onset of her affection is as follows:—

About a fortnight after the shock above referred to, she awoke one morning to find one of her hands "asleep," and concluded she had been lying on it. The fingers from the first inter-phalangeal joint down were white, and quite numb and stiff, like "dead fingers," but instead of disappearing quickly this condition persisted for some little time, the natural colour being then gradually restored with slight pain and tingling. At this time she had a good deal of sewing to do, and she now occasionally found her fingers getting quite numb and powerless while so occupied. Shortly after this—from about the middle of November, 1890—she suffered from constantly-repeated attacks, which came on after rising in the mornings, or in the evenings when it got cold, or during the day on washing her hands in cold water or bringing them in contact with any cold substance. The sequence of events was always the same: at first, pallor and deadness, with a numb feeling in the fingers, which, after persisting for a variable time, was succeeded by a sharp tingling pain, with swelling and lividity of the extremities of the fingers, which became of a dark, greyish-purple colour. In these attacks the pallor and numbness ("local syncope") affected all the fingers equally from the first inter-phalangeal joint, but the second stage of pain and congestion ("local asphyxia") affected principally the terminal phalanges, the little fingers of both hands always escaping. At this time severe darting pains about the shoulders and down the forearms often preceded the onset of the local manifestations. About the middle of December the paroxysms became much more frequent, and were excited by the least exposure to cold, so that now the fingers were constantly swollen and dark in colour, and most of the time excessively painful and tender. For the relief of this poultices were applied, with the result that, though the pain disappeared, blisters containing clear serum formed over all the terminal phalanges, except those of the little fingers, followed by desquamation of the skin and complete shedding of the nails. Small ulcerations were left after the separation of the dead skin at the tips of the fingers just beneath the free edge of the nails; and this condition remained unchanged for some time, associated with a swollen and extremely sensitive state of the fingers, so that she was quite unable for any heavy work. It was not until June of the present year that they had quite returned to their normal condition, and even during the summer attacks of local asphyxia could be at any time induced by immersing the hands in very cold water. The attacks, however, were very slight, and she was quite able for her work without any distress.

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[a] Continued from the number of this Journal for September, 1891. Vol. XCII. No. 237, p. 244.

In October, however, with the onset of colder weather the pains and numbness returned, though not with the same severity as before. The fingers are now affected chiefly in the mornings and evenings, less frequently during the day; and the attacks also differ in an important particular from those to which she was formerly subject, in that the stage of "syncope" is now absent, or so transient as to escape notice, and the pain, swelling, and blueness are the features that first arrest her attention, not as previously the pallor and numbness. The fingers when I first saw her were in this condition: they seemed somewhat swollen but were not œdematous, were a peculiar slaty-blue colour, not the livid purple of ordinary venous congestion, and were slightly painful, though sensation was everywhere normal, and they were not tender on pressure. The scars left by the previous ulceration on the tips of the index, middle, and ring fingers of both hands presented a cracked surface, and were apparently on the point of breaking down into small ulcers. There was no history obtainable of ague or hæmoglobinuria—conditions which have been associated with the affection in a certain number of cases.

While a patient in the hospital[a] various remedies, based on the supposed pathology of the disease, were tried by Dr. M'Hugh; but the measure of success obtained was limited and transitory. This has also been the experience of all previous observers. In order to appreciate the *rationale* of the measures adopted it will be necessary here to briefly review the pathological theories which have been put forward to explain the essential phenomena of the disease.

In Raynaud's original thesis, published in 1862, he refers the phenomena to a condition of "capillary spasm," which occurs in subjects who are "characterised by a nervous predominance." "In the simplest cases," he writes, "those in which the malady remains, if I may so say, in a rough state, the exaggerated peristaltic contraction of the capillaries drives the blood before it, the extremities become pale, withered-looking, and insensible. This is the 'dead finger.' But this phenomenon does not persist long enough for gangrene to follow. To contraction succeeds relaxation, the circulation is re-established, and everything returns to the normal state after a period of reaction more or less painful. Such is *local syncope*, in which the muscles participate in the contraction of the arterioles. *Local asphyxia* is only a more advanced condition. After an initial period of capillary spasm there occurs a period of reaction; but it is incomplete reaction. The vessels which return first to their primary calibre, or even beyond, are naturally those which present in their structure the fewest contractile elements—viz., the venules. At the moment when these are opened, the arterioles being still closed, the venous blood, which had been at first driven back into the great trunks of the dark blood system, flows again into the finest vascular divisions, and then the extremities will take on that tint, varying from blue to black, which is a certain index of the presence of venous blood in the capillary network. . . . . This state may be chronic, and the spasm of the vessels may only have a limited duration, so as to return in irregular or intermittent attacks. . . . . Finally, it may happen, although much more rarely, that the capillary spasm comes on all at once with an intensity and a duration altogether extraordinary. Syncope and local asphyxia succeed one another rapidly. The venous blood becomes insufficient to nourish the parts; the colour becomes deeper and deeper; small blood-stained infiltrations take place through the walls of the venules; these walls may themselves become granular; in one word, there is confirmed *gangrene*, and gangrene which may go on to the fall of many ends of fingers or toes."[a] In a paper, embodying subsequent researches, published in the *Archives Génerales de Médecine*, January, 1874, Raynaud carried his pathological theory a step further back to the central nervous system, and sums it up as follows:—"I would say that in the present state of our knowledge, local asphyxia of the extremities ought to be considered as a neurosis characterised by enormous exaggerations of the excito-motor energy of the gray parts of the spinal cord which control the vaso-motor innervation."[b] Based upon this theory was his plan of treatment by continuous descending electrical currents applied over the vertebral column, so as to act directly on the cord, one pole—the positive—being placed at the nape of the neck, and the other—the negative—over the lumbar enlargement, in combination with the application of the constant current directly to the extremities affected. In this way, Raynaud says; "the action exercised by the current in the cord appears to consist in an enfeeblement of the excito-motor power, whence there results a corresponding relaxation of the reflex vascular contractions," and so, applied during the stage of asphyxia, the occurrence of the consecutive gangrene may be prevented. In a valuable paper on the subject (*Illustrated Medical News*, Vol. III., 1889, p. 178), Dr. Thomas Barlow speaks highly of the value of what may be called the "electrical bath" method of treatment during the continuance of the paroxysm. "The blue extremity may be submerged in a basin of lukewarm salt and water, and one pole may be placed in the water and the other moved about on the limb above the level of the water. The current should be rapidly reversed, made, and broken, and the patient should be encouraged to make voluntary flexions and extensive movements of the limb during the time that it is being galvanised. This should be persevered with till the colour of the extremity has become quite red. . . . . The galvanism and shampooing should be done at least once a day until substantial improvement is obtained, and then this should be maintained by the patient's own shampooing. Lamp baths, vapour baths, or, if they can be got, Turkish baths, should be tried. Diffusible stimulants are of doubtful benefit, and so are narcotics."

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[a] The girl was admitted, November 3rd, into St. Vincent's Hospital, under the care of my colleague, Dr. M'Hugh, and by his kindness I was enabled to show her at the Dublin Biological Club, and to obtain the notes of her case while under treatment.

The theory of vascular spasm receives a certain amount of support from two of Raynaud's cases in which marked visual disturbances accompanied the peripheral paroxysms. In the first case "the patient affirms that his sight is good in the two eyes during the attack, but that during the period which follows, and whilst the fingers return progressively to their natural colour, the sight, especially of the left eye, becomes troubled and confused, recovering at the moment when a new attack supervenes." On ophthalmoscopic examination, during the period of reaction, there were found in the left eye distinct narrowing of the central artery of the retina and of its branches near the papilla, with dilation and marked pulsation in the veins, and here and there partial contractions in the more peripheral parts of the arteries, giving them a filiform outline. In the right eye, in which vision was less affected, the same appearances were found in a slighter degree. During the stage of cyanosis the venous pulsations persisted in both eyes, while the arteries did not recover their normal calibre in all their extent but presented partial diminutions in size, giving them a beaded appearance. In the second case the facts were still more striking. This patient experienced "at the *moment of the commencement of the cyanosis a notable obscuration of sight*, which disappeared at the same time that the face and the hands returned to their normal colour." Examined during a severe attack it was found that at the commencement a narrowing of the arteries of the fundus oculi could be clearly seen, with a subsequent distinct widening at the moment when reaction began. The retinal veins were for the most part turgid, but showed no appreciable pulsation.[a]

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[a] "Selected Monographs." Raynaud on "Local Asphyxia." New Sydenham Society's Translation. 1888. P. 144.

[b] Loc. cit. P. 182.

The only other theory which has at all held the field is that the phenomena are the result of a *peripheral neuritis*. In a few cases interstitial inflammation and degeneration of nerve fibres have been found, but these cases are quite exceptional, and in the great majority of those that have been examined no nerve alterations were detected. It seems, moreover, on the face of it, incredible that phenomena so invariably paroxysmal and intermittent in their characters should be primarily due to an organic and progressive lesion of peripheral or trophic nerves; and it is possible that in these cases the nerve degenerations may have been secondary to an alteration in the nutrition of the parts dependent on the circulatory deficiencies.

Dr. Affleck has published a case in the *British Medical Journal*, December 8, 1888, in which degeneration and interstitial inflammation were found in the nerves leading to the affected part; but on the other hand, Dr. Barlow (*loc. cit.* p. 127) records a case in which the gangrene was so deep and so spreading in type that amputation in the middle third of the thigh was resorted to as a last resource, and in which, subsequent to removal, careful investigation was made into the condition of the nerves and arteries of the limb. The anterior and posterior tibial and plantar nerves were examined, and also portions of muscle with some of the smaller nerve-twigs." No morbid changes were found. "There is no obvious increase of connective tissue in perineurium or endoneurium,

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[a] Raynaud. Loc. cit. P. 165.

the axis cylinders are well marked, and there is no segmentation of myelin." As regards the state of the vessels: "There is undoubtedly some thickening of the outer and middle coat, but it appears to a great extent recent." The arteries were found to be universally thrombosed but this thrombosis was regarded as recent, though the extent and characters of the clot are not definitely given. "There is a remarkable contortion and infolding in some sections of the elastic lamina, and this seems to have followed upon the shrinking of the thrombus. I think some of the nuclear overgrowth of the middle coat has been consecutive to this shrinkage. . . . The veins show some thickening of their walls, quite as much as, if not more than, the arteries." It will be seen that whatever may have been the cause of these arterial changes no neuritis at any rate was present. The account is too meagre to form any opinion on it, but it may be remarked that the appearances found correspond in a marked manner with those met with in syphilitic periarteritis, but it is stated no history of any venereal affection was obtainable.

Such discrepancies, then, existing as to the grosser lesions found in these cases, we may provisionally assume that the most probable theory is that put forward by Raynaud, viz., *the theory of arteriole spasm.* For here it may be remarked that a theory based on the occurrence of arteritis or periarteritis is just as inadequate to explain the phenomena met with, as is a theory based on the presence of a nerve degeneration or a neuritis. Either proposition lands us in a dilemma from which there is no escape. Accordingly rational treatment in the light of our present knowledge must travel on two lines: treatment applied during the occurrence of the paroxysm to relieve the vascular spasm and restore the balance of the circulation, and treatment applied during the intervals to maintain the efficiency of the peripheral circulation, and to endeavour to counteract the faulty habit which has been engrafted on the vaso-motor centre.

The method of treatment by shampooing and the electrical bath has been already referred to; both it, and the application of the constant current by brushes to the affected parts have been found useful during the acute period of the attacks. Another method which has not, so far as I know, been tried in these countries, is that of the "oxygen bath." It is applied as follows:—Each affected extremity is introduced into a chamber, made of indiarubber, which being as hermetically as possible attached to the limb above at one end, is by its other end connected with a tube and reservoir containing oxygen, by means of which from time to time fresh supplies of oxygen are admitted in the indiarubber chamber, and so allowed to bathe the asphyxiated parts.[a] No directions are given as to the period at which this bath is to be given, but it is presumably during the stage of asphyxia, the probable rationale being to promote by an artificial cutaneous respiration the oxygenation of the stagnating venous blood.

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[a] *Dictionnaire de Méd. et de Thérapie*, per MM. Bouchut et Després. Paris, 1889.

Treatment.—The first method tried by Dr. M'Hugh was the application of cold to the cervical spine, combined with elevation of the hands and warmth. An ice-bag was applied to the back of the neck; the hands were enveloped in cotton-wool and were folded across the chest and kept fixed to the opposite shoulders. The first application was followed by an attack of blueness and pain in the fingers, which lasted for about an hour, but was followed by a period of great comfort and free from any attack, which lasted for thirty-six hours. The ice was then removed. The usual attacks followed its withdrawal; and a second application induced a similar series of phenomena, except that the preliminary stage of asphyxia did not last so long. The cold, however, it was observed, always prevented any attack of the fingers subsequently, but had no curative or preventive influence on the paroxysms. Blisters applied to the spine were next tried but without apparent effect, and she was then put upon five minim doses of trinitrin (one per cent. solution) three times a day. This treatment, combined with the local warmth, while continued was capable of preventing any attacks, and she expressed herself as feeling much better. One curious point was noticed while she was taking the trinitrin—that the tips of the fingers, which had previously desquamated, again became covered with freely-separating flakes of skin, leaving the parts underneath of a more healthy colour and consistence. But it was also found that—as, indeed, is the experience of other observers—the effect of the drug was but slight, and any exposure to cold was still liable to produce an attack. In this case the paroxysm—the period during which electricity has been found of decided benefit—was too short and the symptoms not sufficiently urgent to lead me to expect any benefit from the "electrical bath" treatment, and consequently it was not tried. The girl's condition was decidedly ameliorated while in hospital by rest, good food, warmth, and the avoidance of exciting causes, and the tips of the fingers lost to a great extent the characters and consistence of scar tissue and became softer and more pliable; but when she left hospital on November 26th it could not be said that she was a single step nearer a permanent cure than when admitted a month previously.

Disappointing as this result undoubtedly is, it will be found to be identical with those obtained by previous observers, and it may be safely said that the therapeutics of the affection equal in obscurity and unsatisfactoriness the theories that have been put forward to explain its ætiology.

SANITARY AND METEOROLOGICAL NOTES.

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Vital Statistics

For four Weeks ending Saturday, December 5, 1891.

The deaths registered in each of the four weeks in the sixteen principal Town Districts of Ireland, alphabetically arranged, corresponded to the following annual rates per 1,000:—

Towns	Weeks ending				Towns	Weeks ending			
	Nov. 14.	Nov. 21.	Nov. 28.	Dec. 5.		Nov. 14.	Nov. 21.	Nov. 28.	Dec. 5.
Armagh -	6·3	12·6	37·8	25·2	Limerick -	40·6	22·4	19·6	21·0
Belfast -	29·1	28·5	34·0	45·6	Lisburn -	17·2	17·2	21·5	21·5
Cork -	39·9	25·9	30·8	43·4	Londonderry	14·4	27·2	33·6	22·4
Drogheda	39·6	8·8	8·8	8·8	Lurgan -	18·4	18·4	36·8	27·6
Dublin -	28·2	32·3	29·3	33·8	Newry -	23·4	15·6	11·7	15·6
Dundalk -	7·8	19·5	11·7	3·9	Sligo -	10·4	26·0	20·8	15·6
Galway -	38·0	15·2	57·0	11·4	Waterford -	2·4	38·4	19·2	19·2
Kilkenny	9·4	42·3	15·6	23·5	Wexford -	13·5	36·0	22·5	36·0

In the week ending Saturday, November 14, 1891, the mortality in twenty-eight large English towns, including London (in which the rate was 19·6), was equal to an average annual death-rate of 20·6 per 1,000 persons living. The average rate for eight principal towns of Scotland was 28·4 per 1,000. In Glasgow the rate was 29·5, and in Edinburgh it was 26·0.

The average annual death-rate represented by the deaths registered during the week in the sixteen principal town districts of Ireland was 27·6 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·4 per 1,000, the rates varying from 0·0 in eleven of the districts to 5·2 in Sligo—1 of the 2 deaths registered in that district having been caused by enteric fever. Among the 143 deaths from all causes registered in Belfast are 1 from measles, 1 from scarlatina, 6 from whooping-cough, 1 from simple continued fever, 5 from enteric fever, and 6 from diarrhœa. The 57 deaths in Cork comprise 1 from diphtheria and 1 from enteric fever. The 29 deaths in Limerick comprise 1 from whooping-cough and 2 from diarrhœa.

In the Dublin Registration District the registered births amounted to 139—75 boys and 64 girls; and the registered deaths to 192—100 males and 92 females.

The deaths, which are 18 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 28·8 in every 1,000 of the population. Omitting the deaths (numbering 4) of persons admitted into public institutions from localities outside the district, the rate was 28·2 per 1,000. During the first forty-five weeks of the current year the death-rate averaged 25·1, and was 2·0 under the mean rate in the corresponding period of the ten years 1881–1890.

The number of deaths from zymotic diseases registered is 21, being 12 under the number for the preceding week and 4 below the average for the 45th week of the last ten years. The 21 deaths comprise 1 from influenza, 5 from whooping-cough, 2 from simple continued and ill-defined fever, 4 from enteric fever, 4 from diarrhœa, and 2 from erysipelas.

The number of cases of enteric fever admitted to hospital is 25, being a decline of 13 as compared with the admissions for the preceding week. Twenty-five enteric fever patients were discharged, 3 died, and 188 remained under treatment on Saturday, being 3 under the number in hospital on Saturday the 7th.

The hospital admissions include, also, 5 cases of scarlatina and 2 cases of measles, but no cases of typhus were received. Ten cases of scarlatina, 8 of measles, and 3 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system amount to 43, being 6 in excess of the average for the corresponding week of the last ten years and 8 over the number for the week ended November 7. The 43 deaths comprise 26 from bronchitis, 10 from pneumonia or inflammation of the lungs, and 8 from pleurisy.

In the week ending Saturday, November 21, the mortality in twenty-eight large English towns, including London (in which the rate was 20·1), was equal to an average annual death-rate of 20·7 per 1,000 persons living. The average rate for eight principal towns of Scotland was 31·2 per 1,000. In Glasgow the rate was 34·4, and in Edinburgh it was 28·6.

The average annual death-rate in the sixteen principal town districts of Ireland was 28·7 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·8 per 1,000, the rates varying from 0·0 in eight of the districts to 6·3 in Armagh—1 of the 2 deaths from all causes registered in that district having been caused by diarrhœa. Among the 140 deaths from all causes registered in Belfast are 1 from measles, 2 from scarlatina, 5 from whooping-cough, 3 from diphtheria, 5 from enteric fever, and 3 from diarrhœa. The 37 deaths in Cork comprise 1 from whooping-cough, 1 from enteric fever, and 2 from diarrhœa. The 17 deaths in Londonderry comprise 1 from diphtheria and 2 from diarrhœa.

In the Dublin Registration District the registered births amounted to 162—71 boys and 91 girls; and the registered deaths to 226—108 males and 118 females.

The deaths, which are 48 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 33·9 in every 1,000 of the population. Omitting the deaths (numbering 11) of persons admitted into public institutions from localities outside the district, the rate was 32·3 per 1,000. During the first forty-six weeks of the current year the death-rate averaged 25·3, and was 1·8 under the mean rate in the corresponding period of the ten years 1881–1890.

Twenty-four deaths from zymotic diseases were registered, being 4 over the average for the corresponding week of the last ten years, and 3 in excess of the number for the week ended November 14. They consist of 1 from measles, 1 from typhus, 3 from whooping-cough, 1 from cerebro-spinal meningitis, 12 from enteric fever (being 8 over the number from that disease for the preceding week, but 2 under the number for the week ended November 7), 3 from diarrhœa, 1 from dysentery, and 2 from erysipelas.

During the week ended November 7, 38 cases of enteric fever were admitted to hospital. In the following week the admissions fell to 25, and this week they declined to 22, being the lowest number of admissions for any week since that ended October 3. Thirty-seven enteric fever patients were discharged, 3 died, and 170 remained under treatment on Saturday, being 18 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include, also, 5 cases of measles and 1 each of scarlatina, but no cases of typhus were received. Seven cases of measles, 7 of scarlatina, and 2 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had risen from 35 in the week ended November 7, to 43 in the following week, further rose this week to 58, or 19 over the average for the corresponding week of the last ten years. The 58 deaths comprise 39 from bronchitis and 14 from pneumonia or inflammation of the lungs.

In the week ending Saturday, November 28, the mortality in twenty-eight large English towns, including London (in which the rate was 19·9), was equal to an average annual death-rate of 20·5 per 1,000 persons living. The average rate for eight principal towns of Scotland was 31·7 per 1,000. In Glasgow the rate was 30·8, but in Edinburgh it was as high as 35·3.

The average annual death-rate represented by the deaths registered in the sixteen principal town districts of Ireland was 29·6 per 1,000 of the unrevised population, based on the Census of 1891.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·5 per 1,000, the rates varying from 0·0 in nine of the districts to 10·4 in Sligo—the 4 deaths from all causes registered in that district comprising 2 from diphtheria. Among the 167 deaths from all causes registered in Belfast are 2 from measles, 6 from whooping-cough, 4 from enteric fever, and 2 from diarrhœa. The 44 deaths in Cork comprise 1 from whooping-cough, 1 from enteric fever, and 1 from diarrhœa.

In the Dublin Registration District the registered births amounted to 183—97 boys and 86 girls; and the registered deaths to 202—100 males and 102 females.

The deaths, which are 12 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 30·3 in every 1,000 of the population. Omitting the deaths (numbering 7) of persons admitted into public institutions from localities outside the district, the rate was 29·3 per 1,000. During the forty-seven weeks of the current year the death-rate averaged 25·4, and was 1·7 under the mean rate in the corresponding period of the ten years 1881–1890.

Twenty-six deaths from zymotic diseases were registered, being 2 over the number for the preceding week and also 2 in excess of the average for the forty-seventh week of the last ten years. They comprise 2 from influenza, 4 from whooping-cough, 1 from diphtheria, 8 from enteric fever, 6 from diarrhœa, and 1 from erysipelas.

The number of cases of enteric fever admitted to hospital during the week is 20, being 2 under the number for the preceding week, 5 under that for the week ended November 14, and 18 under that for the week ended November 7. Twenty-eight enteric fever patients were discharged, 3 died, and 159 remained under treatment on Saturday, being 11 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include also 4 cases of measles and 1 case of scarlatina; 11 cases of measles and 6 of scarlatina remained under treatment in hospital on Saturday. No cases of typhus were admitted during the week, nor were there any cases of that disease in hospital at the close of the week.

Deaths from diseases of the respiratory system, which had risen from 43 in the week ended November 14, to 58 in the following week, fell this week to 55, but this number is 13 over the average for the corresponding week of the last ten years. The 55 deaths comprise 42 from bronchitis and 9 from pneumonia or inflammation of the lungs.

In the week ending Saturday, December 5, the mortality in twenty-eight large English towns, including London (in which the rate was 21·2), was equal to an average annual death-rate of 22·6 per 1,000 persons living. The average rate for eight principal towns of Scotland was 32·2 per 1,000. In Glasgow the rate was 31·3, and in Edinburgh it was 38·1.

The average annual death-rate in the sixteen principal town districts of Ireland was 34·6 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1·7 per 1,000, the rates varying from 0·0 in thirteen of the districts to 3·1 in Belfast—the 224 deaths from all causes registered in that district comprising 1 from scarlatina, 8 from whooping-cough, 2 from enteric fever, and 4 from diarrhœa. There are also among the 224 deaths 26 from phthisis and 106 from diseases of the respiratory system.

In the Dublin Registration District the registered births amounted to 183—97 boys and 86 girls; and the registered deaths to 231—116 males and 115 females.

The deaths, which are 46 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 34·7 in every 1,000 of the population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 33·8 per 1,000. During the forty-eight weeks of the current year, ending with Saturday, December 5, the death-rate averaged 25·6, and was 1·5 under the mean rate in the corresponding period of the ten years 1881–1890.

The number of deaths from zymotic diseases registered is 22, being equal to the average for the corresponding week of the last ten years, but 4 under the number for the week ended November 28. The 22 deaths comprise 3 from influenza (including 2 cases in which the disease was complicated with bronchitis), 2 from whooping-cough, 7 from enteric fever, 2 from diarrhœa, 2 from dysentery, and 3 from erysipelas.

Twenty-nine cases of enteric fever were admitted to hospital, being 9 over the admissions for the preceding week, 7 over the number for the week ended November 21, and 4 over that for the week ended November 14, but 9 under that for the week ended November 7. Thirty-four enteric fever patients were discharged, 5 died, and 149 remained under treatment on Saturday, being 10 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include, also, 1 case of scarlatina and 2 cases of typhus, but no cases of measles were received. cases of measles, 6 of scarlatina, and 2 of typhus remained unde ment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had fall 58 in the week ended November 21, to 55 in the following we this week to 79, or 36 over the average for the 48th week of the years The 79 deaths comprise 51 from bronchitis and 20 from monia or inflammation of the lungs.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° *Long.* 6° 15′ *W., for the Month of November,* 1891.

Mean Height of Barometer,	29·782 i
Maximal Height of Barometer (on 5th, at 9 a.m.),	30·693
Minimal Height of Barometer (on 11th, at 7 30 a.m.)	28·524
Mean Dry-bulb Temperature,	42·8°.
Mean Wet-bulb Temperature,	41·2°.
Mean Dew-point Temperature,	39·4°.
Mean Elastic Force (Tension) of Aqueous Vapour,	·242 i
Mean Humidity,	88·2 per
Highest Temperature in Shade (on 18th)	57·8°.
Lowest Temperature in Shade (on 24th),	31·4°.
Lowest Temperature on Grass (Radiation) (on 24th),	25·0°.
Mean Amount of Cloud,	54·7 per
Rainfall (on 15 days),	2·911 i
Greatest Daily Rainfall (on 10th),	1·229 i
General Directions of Wind,	S.W., W

Remarks.

Opening with a week of quiet, fine, dry anticyclonic weathe month ultimately proved very cold and changeable. On the 11th astrous cyclone crossed England from S.W. to N.E., causing dest gales from different quarters and downpours of rain in many After this date temperature remained low to the end of the mont one or two passing exceptions, and rain fell frequently, though n rule, heavily.

There was an overwhelming preponderance of southwesterly during the month, but the sky—at least in Dublin—was often cle temperature ruled low.

In Dublin the arithmetical mean temperature (43·4°) was de below the average (44·7°); the mean dry bulb readings at 9 a.m. and were 42·8°. In the twenty-six years ending with 1890, Novemb coldest in 1878 (M. T. = 38·2°), and in 1870 (M. T. = 42·2°), and warmest in 1881 (M. T. = 50·3°). In 1886, the M. T. was as high as 46·4°; in the year 1879 (the "cold year"), it was 43·9°; in 1887, it was as low as 42·6°; in 1888, it was as high as 47·5°; in 1889, it was 46·4°; and in 1890, it was 45·3°.

The mean height of the barometer was 29·782 inches, or 0·078 inch below the corrected average value for November—namely, 29·860 inches. The mercury rose to 30·693 inches at 9 a.m. of the 5th, and fell to 28·524 inches at 7 30 a.m. of the 11th. The observed range of atmospherical pressure was, therefore, 2·169 inches—that is, nearly two inches and two-tenths.

The mean temperature deduced from daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. was 42·8°, or 5·4° below the value for October, and 13·6° below that for September, 1891. The arithmetical mean of the maximal and minimal readings was 43·4°, compared with a twenty-five years' average of 44·7°. On the 18th the thermometer in the screen rose to 57·8°—wind, S.W.; on the 24th the temperature fell to 31·4°—wind, W.N.W. The minimum on the grass was 25·0° also on the 24th.

The rainfall was 2·911 inches, distributed over 15 days—the rainfall was above, while the rainy days were below, the average. The average rainfall for November in the twenty-five years, 1865–89, inclusive, was 2·452 inches, and the average number of rainy days was 17·0. In 1876 the rainfall in November was large—3·614 inches on 20 days; in 1872, also, 3·414 inches fell on 24 days; in 1887, 3·012 inches fell on 18 days; in 1888, 6·549 inches fell on 26 days; and in 1890, 4·212 inches fell on no less than 27 days. On the other hand, the rainfall in 1889 was only ·929 inch on 9 days; in 1870, only 1·218 inches were measured on but 11 days, and in 1879 only 1·251 inches on but 10 days.

High winds were noted on 9 days, and attained the force of a gale on 3 occasions—the 11th, 12th, and 28th. The atmosphere was more or less foggy in Dublin on the 6th, 7th, 13th, 14th, 15th, 23rd, 24th and 25th. Sleet fell on the 26th.

The period ended Saturday, the 7th, proved to be a very uneventful week of quiet, fine, mild, but often dull weather, with easterly winds until Friday, when a shift to the westward took place. During the entire period an anticyclone lay over the British Islands. At first the centre of this system was found over the North Sea to the northeastward of Scotland—at 8 a.m. of Sunday the barometer was as high as 30·73 inches at Aberdeen. After Wednesday, the high pressure system moved southwards, so that the easterly winds died down, giving place to calms and dull weather in Ireland and England, and to westerly winds in Norway and Scotland. On Friday, the westerly current made still greater way southwards, and on Saturday Ireland came well within the influence of a gentle S.W. wind. Owing to the large amount o radiation was much interfered with and therefore little or no fr felt in the British Islands. In France and Germany, on the co the sky was often clear, and sharp frosts prevailed—at 8 a.m. of the thermometer read 19° at Munich and 25° in Paris. In Dub mean height of the barometer was 30·518 inches, pressure dec from 30·693 inches at 9 a.m. of Thursday (wind, E.) to 30·258 in 9 p.m. of Saturday (wind, calm). The corrected mean temperatu 47·7°, or 2·3° above that of the previous week. The mean d temperature at 9 a.m. and 9 p.m. was 47·2°. On Sunday the t meter rose to 53·8° in the screen, on Saturday it fell to 41·2°. was no rain during the week. The prevailing wind was easterly.

No greater contrast can be imagined than that which was pr by the weather of the week ended Saturday, the 14th, to that previous week. Then the barometer was uniformly and conti very high (the mean pressure being 30·518 inches), temperatu relatively high and steady, while the weather was quiet and r Now, atmospherical pressure was most unstable, the mean height barometer was 1·317 inches below that of the former week, temp was low and unsteady, violent gales alternated with calm and f rain fell in vast quantities all over the British Islands. Gradie S.W. winds were already established at the beginning of the wee squalls and rain were reported from time to time. On Tuesday very deep depression approached the British Islands from S.W., growing deeper as it advanced. In its centre the barometer fell t inches or lower, with the result that one of the most disastrous of modern times swept across England. In Dublin the force wind was not great, but rain fell in torrents. On Thursday another equally deep depression arrived off the S.W. of Ireland, it passed off in a northerly direction. It was accompanied by gales and heavy rain in Ireland. Saturday was calm, damp, and and a most inclement week drew to a close with a slowly risin meter. In Dublin the mean pressure was 29·201 inches, the ba ranging between 29·930 inches at 9 a.m. of Sunday (wind S.S.W 28·524 inches at 7.30 a.m. of Wednesday (wind N.N.W.). Th temperature was 43·6°, the mean dry bulb temperature at 9 a 9 p.m. was 42·7°. The thermometer in the screen ranged betwee on Saturday and 50·9° on Thursday. Rain fell on every day, th measurement being 2·098 inches, of which 1·229 inches were reg on Tuesday.

Dull, showery, and unsettled weather prevailed at the beginning week ended Saturday, the 21st, except in parts of Scotland and north-west of Ireland, where the weather was fine and the sky These conditions were brought about by the advance up the

Channel of a complex atmospherical depression during the night of Saturday, the 14th, and in the course of Sunday, the 15th. Unfortunately, this state of things led to the complete obscuration by clouds of the total eclipse of the moon, which took place on the night of Sunday; in the Northwest of Ireland, however, the eclipse was seen in a clear sky. On and after Tuesday the lowest barometrical readings were again found in the Northwest, so that the wind became Southwesterly and temperature rose fast, with cloudy, showery weather. Gradients were not very steep, and so no gales were felt except at a few exposed coast stations. On Wednesday temperature rose to 57·8° in Dublin and to 57° in London and at Cambridge. On Friday the low pressure area passed on to Scandinavia, and the wind drew into N.W. or N. in the British Isles, with a reduction of temperature, which became still more decided on Saturday. In Dublin the mean height of the barometer was 29·720 inches—pressure ranging between 29·352 inches at 9 a.m. of Sunday (wind, N.W. to N.) and 29·951 inches at 9 p.m. of Saturday (wind, N.W.). The mean temperature was 44·5°; the mean of the dry bulb readings at 9 a.m. and 9 p.m. was 44·1°. The thermometers in the screen rose to 57·8° on Wednesday (the highest reading recorded since October 13), and fell to 36·4° on Saturday. The rainfall was ·393 inch on four days—of this quantity, ·211 inch fell on Sunday, which was chiefly dull and wet on the east coast of Ireland.

During the week ended Saturday, the 28th, quiet, cold, but changeable weather held until Saturday, when a moderate southerly gale and heavy rain occurred in the morning. Over Western Europe in general the distribution of atmospherical pressure at first was for the most part irregular, and without steep gradients. As the amount of cloud was slight, temperature became and continued low, sharp night frosts being reported from most stations. On Wednesday a depression was found off the N.W. of Scotland, and cold showers of rain, sleet, and hail fell over Ireland, Wales, and parts of England and Scotland. The rainfall was not heavy except at Holyhead, where ·98 inch fell in 48 hours ending 8 a.m. of Thursday. In the wake of the depression just mentioned several shallow secondary systems passed across the British Islands. On Friday afternoon the only serious depression of the week approached Ireland from the Atlantic. It caused heavy rain and a southerly gale on Saturday morning, but the wind soon veered towards W. with a clearing sky. In front of this disturbance a considerable, but transitory, rise of temperature took place. In Dublin the mean height of the barometer was 29·722 inches, pressure ranging between 29·920 inches at 9 a.m. of Sunday (wind, N.W.) and 29·249 inches at 9 a.m. of Saturday (wind, S.S.E.). The mean temperature was 38·7°. The mean dry bulb temperature at 9 a.m. and 9 p.m. was 37·7°. The thermometers in the screen rose to 51·8° on Saturday, having fallen to 31·4° on Tuesday. Rain fell on three days to the total amount of ·359 inch—of this quantity ·2 was referred to Friday.

Sunday, the 29th, was a fair, bright, calm day. Monday, th was changeable.

The rainfall in Dublin during the eleven months ending No 30th has amounted to 24·521 inches on 163 days, compared with inches on 141 days during the same period in 1887, 25·768 in 173 days in 1888, 25·718 inches on 178 days in 1889, 25·706 on 189 days in 1890, and a 25 years' average of 25·292 inches o days.

At Knockdolian, Greystones, Co. Wicklow, the rainfall in No 1891, was no less than 5·525 inches, distributed over 15 days. quantity 2·330 inches fell on the 10th, and ·850 of an inch on th

From January 1st, 1891, up to November 30th, rain fell at K lian, Greystones, on 155 days, and to the total amount of 30·269

PERISCOPE.

LEPROSY IN NEW SOUTH WALES.

FROM the *Australasian Medical Gazette* we learn that Mr. Sager, S to the N. S. Wales Board of Health, has reported on leprosy colony. Twenty-five cases were under the control of the Boa 1883 to 30th April, 1891. Of these 16 were Chinese, 1 was a J 1 was a West Indian negro, and 7 were Europeans—*i.e.*, of E parentage, but born in New South Wales—all but one males. T cases were reported—one of German birth, immigrant, at the age and one native-born, of European blood. In all the cases the was developed in the colony.

KEEPING DOWN THE DEATH-RATE.

THE New York correspondent of the *Journal of the American Association*, in its issue of Aug. 22, states that an impression pr New York that the so-called "private" hospitals of the city ar habit of improving their mortality statistics at the expense of Hospital, which is maintained altogether with public money. An was reported in the lay press last spring. A negro was found m in the street in the immediate neighbourhood of a certain hosp ambulance of which picked him up, and carried him a mile and Bellevue, to die there. The warden of Bellevue asserted that only one of many cases of inhumanity on the part of private for the purpose of keeping down their death-rates. "We are pow continued the warden, "because most of the hospitals are cl private, although they receive money from the city. These hospitals unload everything at Bellevue that looks like death, and the death-rate here makes it look like a slaughter-house. After dark, every night, there is a string of ambulances from all the hospitals in town passing through the gates of Bellevue, carrying dying patients. These have been treated at the hospitals until there was no chance left of curing the diseases from which they were suffering, and then the order was given to take them to the dead-house—meaning Bellevue. The doctors at the other hospitals laugh at us. Bellevue is a charity hospital belonging to the city, and we have to take all patients who are unable to pay their board." It is fair, however, to add that a committee of the grand jury, reporting on the city ambulance service, denies the charge; such transfers being made, it maintains, only when they ought to be made.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

THE first meeting of the Session, 1891–92, was held at the rooms of the Medical Society, Chandos-street, London, on Friday, the 27th of November, when Mr. Lennox Browne, the newly-elected President, delivered an Address, taking for his subject "A quarter of a century's Retrospect of Laryngology." He first referred to the fact that the opportunities in the shape of special hospitals, and special departments at general hospitals for the treatment of diseases of the throat, as well as the number of patients applying for relief, had multiplied tenfold since the establishment of the Throat Hospital, Golden-square, in 1865, by Dr. Morell Mackenzie, and that that and other special institutions—now considered by some unnecessary—had been the direct means of teaching all those general surgeons of the Metropolis who are attached to special departments, or have since established other special hospitals, and that this is equally true of the provinces and colonies. He also claimed that all the best original work in this as in other specialties had come, not from the general surgeon who flirted with a specialty, but with the well-educated specialist who devoted his life to it. As both a warning and an encouragement, and not for the sake of amusement, the President recalled the ridicule and incredulity with which the laryngoscopic observations of Garcia were received, and the insolent assertions that a special hospital for diseases of the throat to be diagnosticated and treated by the aid of the laryngeal mirror was the acme of quackery. Not indeed that the Throat Hospital was more abused than was the now accepted Royal Ophthalmic Hospital of Moorfields, founded in 1805, which noble institution was described by the medical journal of those days as a "shop for the reception of gulls" and for the "cutting out of eyes," and yet technically an Eye Hospital and a Throat Hospital were exactly on a similar basis of justification. And what had been said of laryngology twenty-five years ago was now being said of rhinology. To justify the position of this offshoot of the science,

Mr. Lennox Browne devoted his Address. He deduced striki
tistics from the reports of the Throat Hospital in Golden-squa
the Central London Throat and Ear Hospital in Gray's Inn-road
between them treated over 13,000 new patients yearly, to pr
statement of Bosworth, of New York, that the majority of dis
the larynx, trachea, and bronchi, commence in the nose, which m
be termed "the front door" of the respiratory passages. Care
tistics taken at the Central London Throat and Ear Hospital had
that "spurs" and deviations of the septum, if not the cause—
worth asserted—of hypertrophic rhinitis, and of many other in
causes of obstruction, are, at least, associated in no less than
cent. of the cases that come under notice. The President also
at some length to the far-extending ill effects of mouth-breath
to adenoids, as instanced by impairment of hearing, sight, resp
and speech, and of the general mental development of the
Amongst other comparatively unrecognised consequences of this c
were laryngismus stridulus and laryngeal growths in young c
cases illustrative of which he had himself had the honour to be
to report at that Association. Passing onwards, the lecturer ref
the enormous advantage in the detection and treatment of tube
generally, as learnt through the lessons of the laryngoscope; to t
of the microscope in its more perfect development of recent time
he attributed to the powerful exhortation of Sir James Pa
examine each morbid growth or product directly after its remov
the living body, while it may be deemed still alive;" to bacte
the younger sister of histology; and, lastly, to the high import
searching for constitutional bases for all special and apparent
maladies, and for correction by education of disorders of the voice
the intelligent application of physiology. The President conclu
Address by quoting an eloquent peroration of Sir James Paget
effect that we must not be content with present utility, for t
utility can be increased only by every increase of our real knowl

AN ANTHRAX REMEDY.

℞. CHLORAL HYD., ℥i; glycerini; aquæ, āā ℥ivss; ft. sol. Gauz
in this solution is laid on the anthrax. This treatment is said t
the use of the knife unnecessary.—*The Therapist*, No. 7.

ARTICHOKE.

M. LE DR. PATHIER draws the attention of the medical professio
breeders and agriculturists, to the fact that the milk of cows
artichoke leaves causes vomiting and purging. According to the
infants are especially liable to be affected injuriously with such
Les Nouveaux Remèdes, Nov. 13, 1891.

HOW ARE THE MIGHTY FALLEN !

In Munich, owing to the many deaths directly traceable to Koch's consumption "cure," its sale is absolutely prohibited. Druggists are forbidden to sell it even to medical men. [We wonder what use the stock on hand is being applied to, or has the high-priced nostrum departed by the closet sewage-pipe from the cabinets of its admirers.]

CLEVER FALSIFICATIONS.

Our contemporary, *Répertoire de Pharmacie*, reports that old almonds and old nuts are by dishonest traders submitted to the action of sulphurous acid vapours, which remove their blackish-brown colour and give them the well-known light-brown appearance so long considered indicative of freshness.

•STRYCHNIN AS AN ANTIDOTE TO OPIUM.

M. C. T. Dercum reports (*Pharm. Zeitung*) the recovery of a patient who had taken 30 grammes of the extract of opium, by hypodermic injections of 0·00375 of a gramme dose of strychnin every hour for seven doses. Prior to using the strychnin, all the usual antidotes and restorative methods were unsuccessfully tried.—*Répertoire de Pharmacie*, No. 8, 1891.

A NOVELIST'S ANATOMY.

That brilliant writer, Rudyard Kipling, describes one of his heroes as being permanently blinded by a sabre cut on the forehead, which *injured the optic nerve.*

QUININE SYNTHESIS.

Amongst the most brilliant of the recent triumphs of chemistry is the synthesis of quinine by MM. Grimaux and Arnaud. They operated on "cuprein," and by a series of well-known substitutions they produce a "methyl-cuprein" which they find to be chemically identical with quinine, and it is to possess the same physiological properties.—*Les Nouveaux Remèdes*, No. 9.

ELECTRICAL TREATMENT OF UTERINE TUMOURS.

Dr. G. Betton Massey, of Philadelphia, read a paper before the American Medical Association, at the last annual meeting, in which he gives the result of Apostoli's treatment in 46 consecutive cases of his own. He excludes from tabulation severe cases ; two because the tumours were polypoid, and five because they were under treatment for too short a time. Of the remaining 39, 12·8 per cent. resulted in complete cure and disappearance of the tumour ; 79·4 per cent. in symptomatic cure with or without reduction in size ; 5·3 per cent. [two] were unaffected ;

and 2·5 per cent. [one] were made worse. In other words, about
cent. were successes and 8 per cent. failures. The case which wa
worse by the treatment died subsequently from septicæmia
attempts to remove the tumour piecemeal; and the anterior wall
uterus was found to be ruptured. It was a case of large intra-
fibro-cyst, treated before it had been pointed out by Apostoli th
cases would be injured by electrical treatment.

MICROCIDINE.

UNDER this name M. le Dr. Berlioz introduces to the Academy of
cine of Paris a new antiseptic substance produced by fusing β n
and caustic soda. It is cheap, non-toxic, more powerful than
soluble in three times its weight in water, and when well diluted
colourless solution.—*Les Nouveaux Remèdes*, No. 9.

SALOL.

IN typhoid fever the best results have been obtained by the adm
tion of three-grain doses of salol every two hours. Tympanites
pears, and diarrhœa, no matter how severe at the commencemen
dually improved; no further special treatment. Temperature
rose after the first day of salol administration, and after the fir
it fell steadily. The average duration of cases treated in this w
17 days.—*The Therapist*, No. 7.

MASSAGE.

DR. AGOSTINI (*Archivio di Ortopedio*) reports 417 cases of accide
massage during the past year. They include 41 tibio-tarsal, 12
carpal, 6 elbow, and 3 knee dislocations.—*The Dietetic Gazett*
1891.

LYSOL.

ONE of the many new antiseptics is stated by Gerlich to be sup
all others. 1. It is an energetic germicide; 2. It is almost od
3. It is soluble in all proportions in water; 4. It is non-poi
He gives the following prescription:—Lysol, 2·5 grammes; wa
grammes; alcohol, 25 grammes; glycerine, 25 grammes—as a
for foul breath or diseased conditions of the mouth and thro
Nouveaux Remèdes, No. 14.

RESORCIN.

H. MENCHE (*Cntrlbl. f. klin. med. No.* 21) strongly recommends teas
doses of a solution of resorcin varying from 1 to 5 per cent. He
that it is indicated in all cases of gastritis, dyspepsia, acute and

cancer, the vomiting of pregnancy, and in sea-sickness. It is, however, contra-indicated in cases of gastric ulcer. The following are his formulæ:—Hydrochloric acid, 2 grammes; resorcin bisublim., 2 grammes; syrup of oranges, 20 grammes; water, 178 grammes. A large spoonful every two hours. Condurango decoction, 180 grammes; rhubarb tincture, 5 grammes; resorcin bisublimate, 2 grammes; syrup of oranges, 20 grammes. ℥ss. every two hours.—*Les Nouveaux Remèdes*, No. 16.

BORIC ACID.

Dr. Keegan (*Provincial Medical Journal*) recommends boric acid in cases of typhoid fever with marked tympany. With doses of eight grains, frequently repeated during the day, he obtained good results in fifty-two cases.

BITES OF POISONOUS SERPENTS.

M. le St. Karlinski, from a large experience of the bites of poisonous snakes in Bosnia, declares that a 1 per cent. solution of chromic acid injected hypodermically successfully acts as an antidote.—*Le Mercredi Médical*, No. 31.

ATROPIN AS A HÆMOSTATIC.

Dr. Bierwierth (*Le Mercredi Médical*, No. 31) reports the successful treatment of almost all forms of bleeding by the hypodermic injection of small doses of atropin. He considers it to be superior to all other remedies as a hæmostatic and suitable for all class of cases.

SPONTANEOUS DORSAL LUXATION OF THE HIP FROM GONORRHŒA.

M. Karewski, at a meeting of the Surgical Society of Berlin, on the 13th of July, exhibited a case of spontaneous luxation of the femur on the dorsum ilii due to gonorrhœal synovitis. The patient was a married woman of forty-one years of age.—*Le Mercredi Médical*, No. 31.

CACTUS GRANDIFLORUS.

Dr. John Auld warmly recommends cactus grandiflorus as a cardiac tonic superior to digitalis and free from its cumulative dangers. He considers it suitable both in cases of venous irritability and organic lesions of the heart. The preparations he uses are the tincture and the fluid extract, which may be given in doses of from five to fifteen minims thrice daily. The following are his formulæ:—Liq. cacti grand., 10 grammes; tinct. of nux vomica, 10 grammes; liquor pancreatici, 100 grammes. Mix. A teaspoonful after each of the two principal meals. Liq. cactus grand., 10 grammes; liq. arsenicalis (Fowler), 30 drops; tincture of gentian, 100 grammes. Mix. One teaspoonful in water every four hours.—*Les Nouveaux Remèdes*, No. 5.

NEW PREPARATIONS AND SCIENTIFIC INVENT

Granular Effervescent Preparations.

Mr. Alfred Bishop, the well-known manufacturing chemi Speck's Fields, Mile End New Town, London, has recently i to the notice of the profession a very elegant series of granu vescent preparations, which cannot fail to supply a want in therapeutics.

Five of these preparations have been submitted to our not contains 5 grains of phenacetin in each drachm; another 5 antifebrin (acetanilide); a third, 2 grains of exalgin; and a grains of antipyrin (phenazone) with one grain of caffein.

The fifth is quite novel to us. It is the granular effervescent of iron, prepared according to Blaud's formula, 2 grains of the present in each drachm. This last cannot but prove a very po pleasant way of giving a ferrous salt in effervescence.

Glycerine Jujubes.

Mr. Stephen Wand, of Leicester, has sent us a box of glycerin which seem to be decidedly superior to any as yet in the marke are made of glycerine and gelatin, and are warranted to contai cent of pure glycerine. They are therefore palatable and most and sedative. At this verdict we have arrived from practical ex

Soluble Pearl-coated Pills.

Mr. Wand, of Leicester, has also forwarded a box of samples pearl-coated pills, selected at random from a list of nearly 1,300 The pills are well made and enveloped in a pearl-coating, experiment is found to crack and expose its contents on imme half an hour in water at blood heat. The disintegration is has the addition of a small quantity of dilute hydrochloric acid.

These experiments would go to show that the pills are likely up and become dissolved in the stomach, and that too without delay. The pills are tastily dispensed in bottles with cork-stoppe with polished wood.

Dermatol.

Messrs. Burroughs, Wellcome & Co. have sent us a spe dermatol, which is put forward as a substitute for iodoform by of Meister, Lucius & Brüning, in Germany. Chemically it is s a basic gallate of bismuth, and the choice of name does not seem a very appropriate one. It is an odourless, light yellow powder, stable towards air and light, and insoluble in the ordinary solvents.

Dr. Glaeser, of Breslau, reports favourably of it as an application to superficial wounds. It is also used in various skin affections, diluted with an inert powder such as starch or talc, or as an ointment (10 per cent.) with vaselin or lanolin. On account of its insolubility its antibacterial action is limited to the part where it comes into direct contact with the pus microbes, resembling in this respect iodoform. In addition to its direct antiseptic action it is claimed for dermatol that it has a desiccating influence, so that the development of the bacteria is inhibited by the drying up of their pabulum. The astringent action of the preparation is also said to influence the process of healing, whilst on the other hand it causes no irritation and is not absorbed. This preparation is further said to be valuable when administered internally in affections of the stomach and intestines, and it is stated that, as it is non-poisonous, doses amounting to 2 grams daily are well borne.

The Combined Spatula, Pen, and Pencil.

Messrs. Burroughs, Wellcome & Co. have sent us some specimens of an invention designed for the special use of medical men who so often require to have at hand a pencil, a pen, and a spatula.

The spatula is made of white metal, nickel-plated, and can therefore be used as a tongue-depressor, fruit-knife, or paper-knife.

The firm supply this ingenious combination at the very low price of sixpence each, post free.

On the blade and handle some of the preparations for which the firm are famous are cleverly advertised.

Benzosol (i.e., benzoyl-guaiacol).

This substance is a granular white powder, with a faint odour, and a somewhat aromatic taste. The drug has been employed with success in the In-patient department of the Mariahilf Hospital, Aix-la-Chapelle, by Dr. Schervier. The Benzosol was tried in 10 cases of incipient phthisis, and decided improvement took place in each case. Benzosol is regarded as an agreeable and harmless substitute for creasote, beneficially influencing the general nutrition, and consequently increasing the resistance of the patient to the disease. Benzosol is decomposed in the digestive tract into guaiacol and benzoic acid, and the former can be detected in the urine and saliva within half an hour after ingestion. The drug is not soluble in water and is decomposed by hot water, so that it must be given in powder. Messrs. Burroughs, Wellcome & Co. are the agents.

Iodopyrin.

This product is a chemical compound of iodine with anti which an atom of hydrogen is replaced by iodine, thus C_{11} It is only slightly soluble in cold water and alcohol, but readil in hot. It is perfectly tasteless and without odour. This pr been tested in the clinic of Professor R. R. v. Jaksch, and is upon by Dr. Egmont Munzer in the pages of the "Prager med. schrift," 1891, No. 4 and 5. The product was first prepared b (*vide* "Berichte der chemische Ges. zu Berlin," 11, 1885).

Dr. Munzer says:—"I have studied the action of this principally on two types of fever—(1) on typhus abdominalis, a pulmonary tuberculosis. Five cases of typhus are recorded, an instance the temperature was rapidly lowered to normal. In th tuberculosis pulmonum the administration of the drug cause sweating, and in every way the antipyretic action was all that desired." When iodopyrin is taken into the stomach it is de into iodine and antipyrin.

A YOUNG ANATOMIST.

When he was but fifteen years of age Albinus was considered haave one of the ablest anatomists in Europe; and at twelve ye Littre was demonstrating anatomy; but what must be said Albert Finch, of Rockport, Indiana, who, though but five years anatomist.

DENTITION.

The fever of dentition is relieved by hot or cold bathing, or doses of aconite, which will probably tide over the period of which comes with dentition, and will prevent convulsions. sions are imminent, give small doses of bromides. Hollopeter.— *and Register*, No. 672.

ERRATUM.

Vol. XCII., No. 240, Third Series, page 501.—Top line, *for* "phytoge "hyphogenous."

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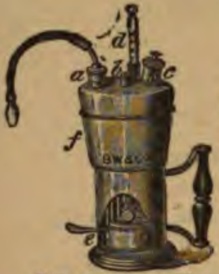
INFLUENZA.—Approved Ther

SIR MORELL MACKENZIE'S HOT-AIR IN

Recommended in dry pharyngitis, laryngitis, bronchial
ozæna, phthisis, &c.



Sir Morell Mackenzie has observed in a very large nu that where inhalations of medicaments, combined with ste by patients, the vapour condenses on the tongue and palat reaches the pharynx, trachea, and larynx, and, observing t has designed a simple method whereby patients can in medicaments, together with heated air from the instrume the above drawing. Patients who have taken inhalations and Terebinthinates evidently inhale these volatile substa air cells of the lungs, as the distinctive odour characterist sorption of these has been observed in the urine four hou lation.

The Hot-air Inhaler (B. W. & Co.) is supplied to the Medi at 14s. each.

Explanation.—*a*, Box with sponge for inhalents. *b*, Inlet for air. *c*, Safety valve meter. *e*, Spirit lamp. *f*, Boiler.

THE KEPLER SOLUTION OF COD LIVER OIL.

The Medical Press and Circular says:—"It is most palatable and easily digested. It is especially useful in consumption, relieving the cough and building up the tissues. Being dissolved in Kepler Extract of Malt, it is perfectly absorbed without exciting nausea or vomiting."

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Supplied to the Medical Profession in ¾-lb. and 1½-lb. bottles, at 1s. 8d. and 3s. each.

NASO-PHARYNGEAL "TABLOIDS,"

Containing Sodium Chloride, Borax, Boric Acid, Benzoic Acid,
Thymol, Ol. Gaultheria, and Cocaine Muriate.
Alkaline and Antiseptic.

Dr. Macnaughton Jones' formula for an antiseptic and detergent m gargle, spray, or irrigation solution for the nares. The difficulty exp obtaining solutions for these purposes, which will not undergo decompos known.

A "Tabloid" makes a perfect solution (Cocaine 1 in 6000) in half a glassful of *tepid water*, and such solution may be used as a gargle or m In irritable conditions of the anterior nasal mucous membrane a small the solution may be sniffed or syringed up the nostrils.

The "Tabloids" are very readily dissolved without crushing, are con portable.

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This drug has been thoroughly tested by the Profession some tir wonderful properties were fully appreciated during the last time *Influ* prevalent in relieving the severe nerve pains and reducing the temper Lauder Brunton (Croonian Lectures) said:—"When large doses of t to be administered, they should be divided and given at proper interv impression is made. We frequently notice that a very small dose of such as three or five minims, will relieve abdominal pain without pro least drowsiness, or indeed without exerting any other apparent effec organism, and a similar result may be obtained in severe headache fr ministration of five or ten grains of Antipyrin."

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FEBRUARY 1, 1892.

PART I.

ORIGINAL COMMUNICATIONS.

ART. IV.—*Nephro-Lithotomy.*[a] By T. MYLES, M.D.; Fellow, Member of Council and Professor of Pathology, Royal College of Surgeons; Surgeon to the Richmond Hospital; Member of Council, Section of Surgery, Royal Academy of Medicine in Ireland.

ALTHOUGH the operation for the removal of stone in the kidney has now been performed fairly frequently, nevertheless, as the subject is one of extreme interest and importance, I trust I may be forgiven for bringing before you a short notice of a successful case that occurred in my practice, not with the hope of being able to add anything to your general fund of information, but rather with the anticipation that the discussion—which I trust will follow the paper—may enable us to obtain the opinions and practice of men whose experience in this branch of surgery is greater than mine.

My case is that of a young man, who was brought to me by my friend, Mr. Louis A. Byrne, now Surgeon to Jervis-street Hospital, and whose history and symptoms suggested the possibility of his having a stone in the kidney. The symptoms were by no means clear or typical. He complained of dull, aching pain in the left loin, not very severe and not paroxysmal; the pain was increased by effort, or coughing, and with this he had intense tenderness on pressure. He had no attacks of renal colic, nor any increased frequency of micturition, nor had he ever pa calculous fragments with his urine. His urine was pr normal, acid in reaction, contained neither pus nor blood, normal in specific gravity and quantity. The young m self—twenty years of age—looked in perfect health, havin complexion, and being free from any emaciation or cachex

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[a] Read before the Section of Surgery in the Royal Academy of Medicine in Ireland, on Friday, December 11, 1891. [For the discussion on this paper, see page 66.]

I had him admitted to Jervis-street Hospital, to which tion I had then the honour to belong, and he was seen times by my colleagues in consultation.

As the symptoms were not conclusive, nor his distress tried the usual palliative treatment for some time—h alkaline diuretics, opium occasionally, and hot stupes over

His condition was not in any way ameliorated by this tr and he still complained of the same dull pain that he had pr suffered from. One day the sister in charge of the ward that she thought the lad suffered much more pain than he ledged, as she noticed him frequently when sitting at h clutch violently at the edge of the table, hold his breath, deadly pale and sick, as if suffering great agony.

On pressing him more closely he confessed that, during few days he had suffered from these attacks, but he mentioned them, as he thought it might be the medicine getting that was expelling the stone, and that his sufferin therefore merely the prelude to his complete recovery.

The diagnosis being now more satisfactorily establishe once suggested an operation, to which he willingly consent

I need not describe the now familiar details of lumbar neph but will merely state that after the usual incision had bee parallel to the lower border of the last rib, and one inch and the perinephric fat exposed, on pushing my finger wound and passing over the anterior surface of the kidney was apparently perfectly normal, I felt a large, hard, tigh lump, which at first, from its position, I believed to be tumour growing from the front and sides of the spinal On more careful manipulation, however, I soon had the grat of feeling that it was continuous with the kidney, and reality a large calculus imbedded in the pelvis of the which it had carried somewhat inwards, and sending short outwards into the hilum of the kidney.

The difficulty now was how to remove it. On the one was obviously too large to be removed by cutting thro kidney periphery, and any attempt to remove it by cutting on the face of the pelvis was bound to give rise to dangerous hæmorrhage from the distended renal veins, which could be seen stretched right in front of the stone.

Acting on the suggestion of one of my colleagues, I determined to attack it from behind, and with that object proceeded to gently raise the kidney off the quadratus lumborum muscle, and draw it forwards in the wound, so as to leave room for my fingers to touch its posterior and inner surface. I could now feel the calculus very clearly, and ascertained that at one part the investing pelvis was extremely thin. Through that thinned portion I now scratched cautiously with a director, and made a comparatively small opening; a little gentle fingering now enabled me to revolve the stone upon its axis, and coax it out of the kidney. Through the wound in the pelvis I now explored the rest of the kidney thoroughly for another stone, but did not find any.

The wound was now well douched, all bleeding vessels clamped and ligatured, and the edges brought together with stout silk sutures; a large drainage tube was passed as far as the kidney, and fixed by a suture to the skin.

I will not weary you with a dry detail of his subsequent progress from day to day, but will merely state that, with one exception, the boy made an uninterrupted recovery, and I had the honour to show him last year at a meeting of the Surgical Section, perfectly well and able to follow his usual avocation.

The exception to which I referred was the fact that for four days after the operation he had profuse hæmaturia—so much so, indeed, as at one time to cause me considerable anxiety. He was put on 10 minim doses of hazeline, which acted like a charm in arresting the bleeding; from that on his recovery was rapid.

This case of itself is not of any special interest, except from the fact that the symptoms were obscure at first, and that the stone was very large, weighing 282 grains! being, I think, the largest ever removed unbroken by any surgeon in Ireland, and, as anyone can see who examines it, it is almost a perfect mould of the pelvis and infundibula.

Although there is nothing very startling in the case, nevertheless I bring it forward in the hope that it may act as text upon which more skilful preachers may lay down the law, and some clear and definite decision may be arrived at upon some of the many interesting and as yet doubtful details of the operation.

1st. Having diagnosed the existence of a stone in the how should it be removed?—by the simple lumbar incisi the combined method of Thornton?

This latter method, which has been so strongly advocat originator, consists in opening the abdomen in the lin lunaris, placing the hand in the cavity, and feeling the ki the stone, and having found it, the kidney is steadied hand in the abdomen, while the surgeon, turning the slightly on his side, cuts boldly down to the kidney from by a short incision; the stone is then cut out and remove lumbar wound.

This seems at first rather a startling addition to lumbar tomy, inasmuch as it superadds an abdominal exploratio main operation; nevertheless, its author asserts that it doubted advantages, which he briefly specifies as follows:—

1st. Certainty that the patient has two kidneys.

2nd. There is less danger of overlooking the stone.

3rd. There is no danger of cutting into the wrong kid accident of not uncommon occurrence.

4th. There is no danger of wounding either the colo peritoneum.

5th. As the wound is small there is no danger of a loi and less danger of urinary extravasation or fouling of the

6th. The condition of the ureter and of the other kidne ascertained.

7th. The kidney can be thoroughly steadied during th quent steps.

On the other hand, Mr. Thornton says the only objectio method is the addition of another wound, which, he says, i little importance in the hands of a cleanly surgeon.

Although considerable difference of opinion may exist value of some of these so-called advantages, there can be whatever but that two of them are of great importance— the assurance that you are cutting on the pathological kid not on the healthy one, and the benefit to be derived from the kidney thoroughly fixed.

It may seem absurd at first sight to contemplate the po of cutting into the wrong kidney, but every practical ma well that it may occur to the most careful surgeon, a occurred already to some of the most distinguished.

A patient with a stone in the kidney may refer the pai healthy side, and complain of no pain in the diseased side; or more frequently he complains of pain in both sides, and it becomes a matter of the most extreme difficulty to make sure whether there is not a stone in both kidneys, or if in one only, in which one?

In such a case Mr. Thornton says the abdominal section converts doubt into certainty, and by rendering a possible second operation unnecessary, adds greatly to the chance of a safe issue from the patient's danger. Now is this true? If it be absolutely true, I think no one would question the propriety of the method in all cases where there was any reasonable doubt as to the exact seat of the stone. But is it really absolutely true that an abdominal section enables a surgeon to discover the presence of a stone in the kidney?

I would, with great deference to such distinguished authority, venture to suggest that even the most careful and accomplished surgeon may fail to recognise a stone in the kidney by exploration with the hand in the abdomen, and I would go even further, and point out that it has occurred that, even after a kidney has been removed and laid on the table, the most careful palpation has failed to discover a stone actually in the organ.

If this be possible, even with a removed kidney, how much more probable does such a failure become when we endeavour to explore the kidney covered in front by colon and tightly stretched peritoneum, and with its hinder border and inner surface entirely out of our reach. Through such an abdominal wound no surgeon would venture to needle the kidney, and yet how often has the needle disclosed a stone unrecognised by the most careful palpation. Again, if the kidney is seriously diseased, and if its sinus is distended by abscess formation, its coverings thickened by an inflammatory process, and the viscera matted together in front of it by localised peritonitis, how easily may a stone escape detection by exploration through an abdominal wound.

Further, we are all aware that small stones usually lie concealed in the calyces of the ureter deep in the kidney sinus, and that detection of such stones is frequently possible only by sounding through an incision in the lower border of the pelvis, or through the kidney substance. How can we use this important aid through an abdominal incision?

I think I have said enough at least to show that Mr. Thornton's method, so far as its being an aid to certainty of diagnosis is concerned, is not altogether unassailable.

The other asserted advantage which I have, merely for of convenience, placed second to the question of diagno claim that the kidney can be fixed by the hand in the and the necessary manipulations for the removal of thereby more rapidly and successfully performed.

No one, I think, will question the statement that difficulty in lumbar operations arises from the fact that t has an unhappy tendency to glide away from the fingers patient is lying on the opposite side, and this combined occasionally very narrow ilio-costal space renders ma through the wound difficult and tedious. Anything, which steadies the kidney must be beneficial, and the onl issue really is, can this steadiness be obtained in no o except by a sectio-abdominis?

I think it can, and the alternative method is that men Mr. Thornton himself, of placing the patient almost f back, with the wounded side overhanging a pretty hi while an assistant applies to the front and opposite si abdominal wall steady and continuous pressure. By such the kidney can be fixed, and when we remember that in the stone must be removed by the loin incision, the ad such a method, if proved feasible, would render the a wound unnecessary. Further, the so-called fixing of th by pressure from within is not free from danger, it can obtained by traction on the fragile renal vein, and I nee delay to point out the possible catastrophe that might re such traction.

I have spent some time in considering these two repute tages of Mr. Thornton's method, because they are, to my only ones of real importance; the others are hardly worthy

His claim that his method prevents a patient with kidney being operated on, is simply puerile. It may pre from having his kidney cut open, but it does not hi abdominal section, and simple as that operation is, a pat only one kidney runs a poor chance of surviving it. Agai ture to state that the combined experience of this Acade fail to register more than half a dozen cases out of the t of bodies examined in the dissecting and *post-mortem* which only one kidney was found. So also the dangers quent lumbar hernia, and of wound of the colon in the lo tion, are greatly exaggerated.

k I am justified, therefore, in stating that I have shown claims which Mr. Thornton makes for his combined are based upon arguments that are at least open to and that the added dangers of the extra incision more pensate for any possible advantages it may possess.

concluding, I would like to obtain the opinion of the n some details of the lumbar operation :—

Mr. Jordan Lloyd's method of sounding each calyx by a ound inserted through the pelvis of the ureter feasible? ery least I should say it must be extremely difficult in all re the ilio-costal space is narrow, as owing to the depth dney the movements of the sound must necessarily be ted, and even its mere introduction cannot be easy.

he stone having been found, how should it be removed? through the kidney substance, or by cutting into the Against the former is the danger of hæmorrhage and shock; against the latter the possibility of a permanent

a great deal of confusion has arisen in connection with cular matter, by the very loose and unscientific way in tomical names are used. For instance, one writer says— to the pelvis of the kidney from the front." Now he do this, because the kidney has no pelvis, and if his means that he cut into the pelvis of the ureter from I say that no surgeon in his sober senses would do it emembered that the renal veins and artery completely ne-tenths of the pelvis, and that any attempt to do it imply the recklessness of anatomical ignorance.

en do such statements mean? The answer is simply— he operator cut something, and, let us hope, found the ut what he cut we do not know, and probably never shall. , that even such an accomplished surgeon and anatomist eves is guilty of this unpardonable mistake, as in his blished work on operative surgery, having first carefully the relations of the pelvis, calyces, &c., he subsequently the error of speaking one moment of the pelvis of the in the next of the pelvis of the kidney. Such a lack of ccuracy can lead to nothing but confusion, no one knows eant, and the value of all descriptions of such operations *il.*

ow conclude by thanking you and the members of the

Section for the kind attention you have given, and as the object of my paper was to obtain information rather than to give it, I trust that the more experienced nephrotomists will give us their opinions on what I venture to call points of importance in connection with nephro-lithotomy.

ART. V.—*Some Recent Aids to the Diagnosis and Treatment of Diseases of the Stomach.*[a] By H. C. TWEEDY, M.D. Dubl., F.R.C.P.I.; Physician to Steevens' Hospital.

AT the commencement of last year's Session this Academy had the privilege of hearing from Professor Purser a dissertation on "The Modern Diagnosis of Diseases of the Stomach," which will long be remembered by all of us who were present on that occasion.

The absolute clearness with which this complex subject was treated, and the closeness of reasoning displayed, following each point to its logical conclusion, were sufficient to account for the lasting impression left upon our minds, while the labour and research evidenced in every page render the lecture, now fortunately preserved for us in the Transactions of the Academy, a perfect storehouse of information for all who may wish to refer to the extensive literature of Diseases of the stomach.

Dr. Purser dwelt chiefly on the modifications the digestive process, as carried on in the stomach, undergoes in disease. In this paper I shall endeavour to lay before you very briefly some mechanical aids now at our disposal for the physical examination of the organ itself, for obtaining portions of its contents for chemical analysis, and for the treatment of some of its most common diseases.

I shall submit to your consideration two methods of physical examination which, as far as I am aware, are not employed here as frequently as they should be. Also two recent appliances—one for obtaining small quantities of stomach-contents for diagnostic purposes, and the other for applying electricity directly to the stomach.

The first mode of physical examination to which I would draw your attention is what has been termed the "Splashing Sound," or "Clapotement"—a method of examination much lauded by Riegel, off, Boas,[*] and others who state that they find it gives esults than percussion.

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[a] Read before the Section of Medicine in the Royal Academy of Medicine in Ireland, on Friday, December 18, 1891. [For the discussion on this paper, see page 68.]

sound may be elicited by pressing repeatedly with the tops fingers in the epigastric region. Its lower limit rarely below the level of the umbilicus, unless the stomach be or else displaced downwards. It may be heard in healthy more or less plainly if they have taken a large quantity of if the abdominal walls are relaxed, and not overloaded .

method has a double utility. In the first place, we may be scertain by it the size and position of the stomach. If, ance, we palpate very gently from below upward till g is perceptible, then we may in many cases be able to t a fairly accurate conclusion as to the contour of the ; and not only so, but we may also get an idea as to the n of its muscular layer, for let a healthy person drink 50 rammes of water we can detect no splashing, even when ominal walls are thin; on the other hand, if the muscular the stomach be wanting in tone (although there may be tion or retention of the food taken), the sound may be very distinctly by the above-mentioned quantity of water, by a smaller quantity.

r some circumstances splashing may originate in the se colon; but in this case the splashing is found along a line, or along a curve which is slightly convex *above*, and s be distinguished from that originating in the stomach by that the latter forms a convex line *below*, and ascends y from the median line. Should these differences not be y marked, we may inflate the stomach by means of a tube ble-rubber bulb. After insufflation of air the splashing the stomach ceases, while that in the colon persists; but as the air is allowed to escape from the stomach the g sound immediately reappears.

artificial distension of the stomach by gas or air has been nployed on the Continent as an aid to diagnosis, with ct of enabling us to map out the contour of the organ, y the greater curvature in a more accurate manner. It ginally introduced by Frerichs and Mannkopf, who carried process by generating CO_2 by the separate introduction of of tartaric acid and bicarbonate of sodium Boas and others

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[*] eine Diagnostik und Therapie der Magenkrankheiten. Leipzic. 1890.

accomplish the same object, gradually inflating the stomach
means of the double-rubber bulb, attached to an ordinary stom
tube. This method, which was first employed by Runeb
possesses striking advantages over insufflation by CO_2.

In the first place the quantity of air employed can be accura
gauged and controlled, so as to increase or diminish it accor
to circumstances. Moreover, the estimation of the amount of
employed is of itself useful for diagnostic purposes, as a rela
and dilated stomach requires much larger quantities of air tha
healthy stomach with normal muscular tone. The outlines of
stomach are also brought into greater prominence, so that
portion of it lying against the abdominal wall can, as a rule, be
pated thoroughly and without undue haste, whereas in the carb
acid method this can only be done while the development of
gas is taking place; for as soon as this process is completed
CO_2 escapes rapidly from above or below, and the stomach ag
contracts before a thorough examination can be made.

During artificial distension of the stomach with CO_2 or ai
sometimes happens that the stomach itself does not become
larged, but that the outlines of the intestines become und
prominent. This condition was first observed by Ebstein,
described as insufficiency of the pylorus. Boas and Ewald h
demonstrated, however, that these cases are accompanied by
abnormally rapid fæcal evacuation, and both writers are of opin
that, aside from insufficiency of the pylorus, there is in such c
an accelerated discharge into the intestines of alimentary s
stances undigested in the stomach.

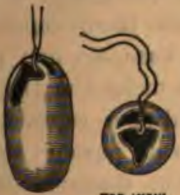
Numerous methods have been suggested with the object
demonstrating the size, position, and capacity of the stoma
notably those of Schreiber, Rosenbach, Fleischer, Jaworski,
others, all of which may be found fully described in Boas's rec
work. Also the attempts at electric illumination of the stom
by gastrodiaphany, as lately proposed by Dr. Einhorn, by me
of a Nélaton's tube, provided with an Edison's incandescent la
on the plan of Voltolini's method of illuminating the larynx.

These methods, however curious and interesting, are practica
useless now that we possess in insufflation a procedure which
both certain and devoid of danger when practised under pro
precautions. Boas lays down the following contra-indications
the use of air or CO_2, as well as to the introduction of
sound :—(*a.*) Constitutional or local diseases in which the irri

nected with use of the sound, or insufflation, may enhance
ise or threaten the patient's life; (*b*.) Gastric and intes-
seases, which can be diagnosed without resort to the
tc.—especially gastric ulcer and adhesions of the stomach-
d also suspected atrophy of the gastric mucous membrane.
is one purpose for which up till very recently the use of
nach-tube has been regarded as indispensable—viz., the
g of portions of the contents of the stomach for chemical
by Ewald's[a] "expression method." There are sometimes,
difficulties in this mode of examination which, all im-
as it undoubtedly is, render both doctor and patient too
dispense with it, often to their mutual injury.

al contrivances have been suggested as alternatives for the
he tube. Edinger and Späth[b] suggested that the patient
e made to swallow particles of elder-pith, stained with
ate re-agents, or leaden balls, to which are attached threads
with the test re-agent.

er[c] also suggested the plan of causing the patient to
a small sponge attached to a thread. The sponge was
to remain in the stomach for several minutes, and then
wn, after which the contents were pressed out and
d for HCl. This test, however, fails in two particulars—
sponge is partly expressed during its withdrawal through
phagus, and thus loses much of its contents; secondly, it
fluid from the moisture of the œsophagus and pharynx—
e stomach-contents cannot be examined pure.



a view to obviating these disadvantages, Dr. Einhorn,[d] of
rk, has devised an ingenious little instrument, which he
"stomach-bucket," and of which I have the pleasure of
ng to you this drawing. This consists of a small oval

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ld and Boas. Virchow's Archiv. CI., 325, 1886, and CIV., 271, 1888.
ich. med. Wochenschrift. XXXIV., 51. 1887.
ger. Deutsche Archiv. f. klin. med. Bd. 29, p. 555.
. Med. Rec. July 19. 1890.

vessel—1¾ cm. in length, ¾ cm. in breadth—made of silv upper portion is open, but bridged over by an arch of tl metal, to which is attached a silk thread.

Dr. Einhorn gives the following directions for the use apparatus:—

"The patient is asked to open his mouth widely, and t vessel is placed on the root of the tongue (almost in the pl after which the patient is to swallow *once.* The vessel rea stomach in a short time (one-half minute to one and a half m This point can be easily found by the length of the thre the vessel to the mouth; it equals the distance from the the cardia, which is usually 40 cm. It is advisable to mak on the thread, marking 40 cm. When this knot comes mouth, then we are sure the vessel is in the stomach. Th having been left in the stomach for about five minutes, withdrawn. During withdrawal of the apparatus, a resis felt at the introitus œsophagi. To overcome this difficult the apparatus is at that narrow point the patient shoul deeply expire or swallow once. By the act of swallowi larynx is pushed upward and forward, and thus the pa free.

"If the stomach is not empty the vessel returns filled, amount is sufficient for making qualitative tests for free chloric acid and the rennet ferment."

"In people suffering from an abundant secretion fr mucous membrane it may happen that the bucket may filled with mucous before entering the stomach. (In e the vessel it is always easy to distinguish real stomach- from plain mucus.) In case we find principally mucus vessel, it is necessary to make the trial again, and to c opening with a thin gelatinous capsule, which keeps the away from the vessels on its passage to the stomach; tl capsule is dissolved, and the stomach-contents can enter into the apparatus. On its return from the stomach, the ' being filled, the mucus cannot to any extent enter into it."

"If the sample from the 'stomach-bucket' give a positive of HCl (with Congo, or Günzburg's phloroglucin-vanilli then the same is made use of at once; but should it prove as to the presence of HCl the obtained sample must be e more minutely, and if it is found to be mixed with much

[*] Ctbt. für klin. Med. 1887. P. 737.

s necessary to obtain another sample with capsule covering bed above."

est time for making an examination is just as usual—one er Ewald's "trial breakfast,"[a] or three to four hours after inner.

s without saying that for a full and exact analysis of the of the stomach the use of the tube is indispensable, but horn claims certain advantages for his apparatus, which I endorse:—

t is more simple and easy to use than the tube, and causes ion to the patient.

It is a great advantage to the general practitioner, who intend to make an exact analysis of the stomach-contents, le in this rapid manner to determine whether there exist l or not.

Even in gastric ulcer there is no danger whatever from rhage in consequence of the examination, for which reason hod may safely be employed in cases where there is a sus- an ulcer of the stomach, and where there may be danger a tube.

The introduction of the bucket may elicit information g several other points connected with the œsophagus and *e.g.*:—

The permeability of the œsophagus.

In extracting the vessel, the determination whether the cardia is closed (in this case a certain resistance is felt as soon as the "bucket" touches the cardiac orifice).

One is enabled, as soon as the bucket is in the stomach, to study to some extent the contractions of the organ by observing how far, with what force, and at what intervals the thread is pulled further in, for the thread *alone* affords too few supporting points to be moved by the contractions of the œsophagus. In this way every traction of the thread hints at further locomotion of the apparatus in the stomach.

e now say a few words regarding the use of electricity in tment of diseases of the stomach. It has long been known

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e relative value of the "Probefrüstück" and "Probemittagbrod," see the . Wochenschr. 1888. No. 32, 647.

from the experiments of Ludwig and Weber,[a] von Ziemss Bocci,[c] that galvanic and faradic currents, applied directl stomach of animals, produce contractions of the organ, an increased secretion of gastric juice. But for years past have been applied percutaneously over the human stoma number of observers—notably, Neftel,[d] Fürstner,[e] Leube,[f] E and others—with beneficial results in dilatation resultin chronic catarrh, in nervous dyspepsia, and other diseas more recently Ewald and Einhorn[h] demonstrated an in motility of the stomach under the influence of percu electricity, by the appearance of the salol test[i] in the urin one-fourth of an hour earlier than usual; and A. Hoffmann[j] that the galvanic current, applied in the gastric region for minutes, produces an abundant secretion of gastric juice.

Notwithstanding all this, it was considered very dou electricity applied in this manner was able to produce to its beneficial effects, as it was considered questionable whet direct peristalsis results, but rather (as held by Kussmaul,[k] and others), that the good results obtained in cases of di were mainly attributable to the favourable influence of t traction of the abdominal walls. Accordingly, Duchenn Kussmaul,[n] and later, Bardet,[o] Baraduc,[p] Stockton,[q] Ewa Boas[s] have recommended direct electrisation of the stomac various electrodes which were in fact all modifications stomach-tube, constructed so as to act as an insulator to th lent inconvenience of this bulky arrangement, and the the tube containing the electrode had to be kept in the ring the whole time the electricity was being applied, has l this method of treatment from attaining any great y, as only persons accustomed to the frequent use of the tube could bear the procedure at all, and even to them it nsiderable discomfort.

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[a] Kussmaul. Arch. f. Psych. und Nerv. 1877. Volume VIII., p. 205.

[b] Von Ziemssen. Klin. Vorträge. No. 12. Die Electricität in der Med

[c] Bocci. Lo Sperimentale. June, 1881.

[d] Centralbl. f. d. med. Wissensch. 1876. No. 21, p. 370.

[e] Berl. klin. Wochenschr. 1876. No. 11.

[f] Deutsch. Arch. f. klin. Med. 1879. Tome 23, p. 98.

[g] Berl. klin. Wochenschr. 1882. Nos. 13 and 14.

[h] Verhandl. d. Vereins f. innere Med. 1888. P. 58.

[i] Ewald and Seivers. Klinik d. Verdauungskrankheiten. II., 58.

[j] Berl. klin. Wochenschr. 1889. Nos. 12 and 13.

[k] Arch. f. Psych. und Nerv. 1877. VIII., p. 305.

[l] Philad. Med. Times. May, 1871. P. 274.

[m] Cited from Kussmaul.

[n] Loc. cit.

[o] Bull. Gén. de Thérap. 1884. Tome 106, p. 529.

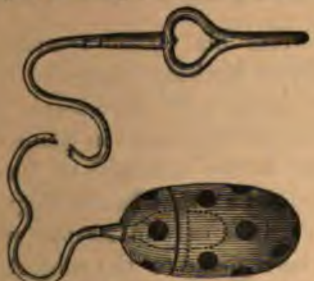
[p] Journ. de Med. Practitioner. Dec., 1888. P. 455.

[q] N. Y. Med. Rec. Nov. 9, 1889. P. 530. And Amer. Jour. Med. S 1890. P. 20.

[r] Klinik d. Verdauungskrankheiten. P. 64. Berl. 1889.

[s] Allgemeine Diagnostik der Magenkrankheiten. P. 289. Leipzig. 189

nportant mode of treatment is, however, likely to receive impetus, in consequence of the recent production by Einhorn[a] of a new electrode, by which the disadvantages o have been obviated. It is constructed on the same as the "stomach-bucket" which has just been described, swallowed reaches the stomach without further artificial silk thread of the bucket is represented in the electrode fine (1 mm. in diameter) rubber tube, through which a soft, conducting wire runs to the battery. The end- the electrode consists of a hard rubber capsule, of the and shape as the "stomach-bucket," with many openings. psule lies a metallic button, which is connected with the he rubber capsule serves to avoid direct contact of the h the stomach-walls. The circuit is completed in the as in Bardet's electrode, by the water the stomach con- he other (ordinary) electrode is best placed either on the he left of the seventh dorsal vertebra, or in front over stric region, or is simply held in the hand.



ectrode is introduced and withdrawn in the same manner "stomach-bucket." No force is necessary for its with- one has only to make the patient swallow once or twice, nake use of the moment when the larynx by this act and the passage becomes free to withdraw the electrode, now done with perfect ease.

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[a] N. Y. Med. Rec. May 9, 1891.

Dr. Einhorn further describes a series of test experimen
upon healthy persons, with the result that, in each case,
application of direct faradism there was a marked inc
acidity. The conclusion that the faradic currents incr
production of the gastric juice seems to be justifiable.

As regards clinical experience, the most marked resu
been obtained in cases of dilatation, and also in chroni
catarrh; the improvement in the latter cases being dem
by chemical analysis. Two cases especially are to be
very aggravated chronic gastric catarrh in which free H
never be found after the test meals; the same could
detected after the stomach had been faradised internall
minutes. Dr. Einhorn also mentions two cases of pure g
which derived benefit from the internal application of the
current.

I cannot pretend to have offered to you in this paper
original, or even anything particularly novel; but I was de
bringing before the Section, however imperfectly, a subje
in the course of some reading and a little observation, had
particular interest to myself.

ART. VI.—*Some Recent Modifications in our Views of* *Fever and its Treatment.*[a] By M. A. BOYD, M.D., F. M.R.C.P.I.; Physician, Mater Misericordiæ Hospital,

SINCE Murchison wrote his classic treatise on Enteri
we have added almost nothing clinically to the accu
scientific description he gave of the disease. He covere
description almost the entire ground in connection with th
and its history, and in the closeness of his reasoning
ætiology he foreshadowed all that bacteriology has since d
regarding it. In fact, it is only in its bacteriological as
any additions have been made to the subject, and it is f
side alone that any additional knowledge is likely to co
can finally determine the mode of its origin. The a
bacteriological data, however, we now possess have con
narrowed the issues, and enabled us to regard the disease
standpoint of being an acute infective disease which h

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[a] Read before the Section of Medicine in the Royal Academy of
Ireland, on Friday, December 18, 1891.

t considered, in which, like phthisis and pneumonia, a
cillus plays the important part.

hat bacillus was discovered by Koch and Eberth, and its
ies and mode of growth were studied, more especially
tter observer, our views as to the ætiology of the disease
iderably changed, and the time has, I think, now come
ing advantage of the experiments of various other bac-
s, in addition, we may form more definite ideas as to its
propagation, to its prevalence at particular seasons, and
tion of the symptoms present in its various stages, as
suggest some rational means for treating it.

first refer to the typhoid bacillus and its discovery. In
h and Eberth almost simultaneously discovered in the
the mesenteric glands and lymphatics, and especially in
of patients dying of enteric fever, a bacillus, which,
equently found in the intestines as the common Bacterium
umed at particular seasons, or owing to some alteration
mal vital resistance of the individual, an acutely infective
filtrating the adenoid tissue and lymphatics of the intes-
npanied by the chain of febrile phenomena we designate
r enteric fever. Owing to the difficulty of finding a
utrient medium on which to grow it outside of the body,
us could not be differentiated from other bacteria inha-
alimentary canal until Koch succeeded in isolating and
on dry gelatine plates; since then all pathologists are
ith its appearance and mode of growth. So far all
ts have failed in producing the disease from these culti-
inoculation; but bearing in mind it grows both as an
and as an anaerophyte, it may be innocuous in the former
and infectious in the latter when in the alimentary canal,
vital resistance of the tissues in that situation may be
reason altered. What may produce these alterations I
le to presently. Gaffky, in his observations on this
as given us some valuable information as to its situation
h. It is one of the few bacilli found to develop freely
and it grows abundantly in milk. He also found it in
rough which water percolates, and it grew freely in all
s media. He also found it more abundant in all these
the autumnal season more than any other—a fact of
le importance. If, however, this bacillus is found so
in the food we eat, the water we drink, and in our

intestines, how, we may ask, is it that it does not infect t tinal glands when present and produce enteric fever in eve For we must all take it in at some time or other if it is no present in our intestines. With this question I may others: why is it we do not suffer from pneumonia co when we always carry about with us the germs of the d Fränkel's diplococci; or why not frequently suffer from scribed or diffuse suppurations when the micrococci that them are frequently present in our blood or tissues?

Why we do not, recent investigations in bacteriology ha clear. Bacilli or micrococci are in themselves harmless the blood or tissues until the vital resistance of some lowered, from either functional alteration or injury, wh readily find a suitable soil in it on which to grow and It is by this growth and the chemical products generated that the mischief is produced, and the poisoning of the around that are most susceptible to its action afford a furt for the growth of these micro-organisms.

Let me take, first, the experiments of a distinguished gist, and, secondly, the course of a fatal disease, with whi cally, we are only lately becoming familiar, to illustrate my Professor Kocher, of Berne, in making experiments on an destructive injury to tissues, down even to the marrow c with a hot iron, could not produce septic inflammation as the animal experimented on was healthy, but if he low vitality of it by feeding it on putrid matters, permitting septic micrococci to enter its blood, a septic inflammatio once produced. The other disease I have alluded to in tion—namely, septic or suppurative endocarditis—we kno from either the staphylococcus or streptococcus when p the blood from any accidental cause, finding a nidus in an endocardium or damaged valve, and the chemical produ growth is then wafted in the blood current to set up mi other situations, where, from anatomical causes or lowe resistance, the blood and tissues cannot overcome its The germs of typhoid fever, like all other septic germs, regarded as in themselves harmless as long as the tissu which they are in contact are healthy, else how can we ex immunity from the disease that exists in healthy individ constantly either receive them through food or drink alimentary canal, or have them as a normal and constant rings me to the vexed question of the ætiology of the If we take it for granted that the bacillus of Eberth is, ltration of the glandular tissue of the intestine, the cause mischief (and, apart from the absence of the inoculation most pathologists are agreed that this is so), what are tions that favour or produce its acute infection of those

ve, first, the evidence that this bacillus is found growing uriantly, and, we must presume, consequently that it is lent and more capable of making a vigorous battle for its , in the autumn. But it must find the tissues with which in contact in a weakened condition to get the upper hand uggle.

e intestines at this period of the year in a more weakly than at any other, and, if so, from what cause? I think nswer that question in the affirmative.

f us are familiar with the gastro-intestinal troubles that acteristic of the early autumn months, the gastro- catarrh especially; the catarrhal or autumnal diarrhœa; requency of so-called bilious attacks at this season. How arrhs are produced we have a ready explanation in the of temperature in the evenings, after, perhaps, a warm when the action of the skin is suddenly checked, and no precautions as to clothing are adopted. All hospital s are familiar with the sudden onset of bronchial catarrhs ason also, from the same cause, and the rapid filling of vards with cases of asthma, emphysema, and fresh broncho- ia in cases the subjects of phthisis during the previous and spring. Now, let us see if this gastro-enteric catarrh precursor of enteric fever. Murchison, with that acute observation which was characteristic of him, mentions it usual symptom preceding and accompanying the fever in stages; and he further adds that catarrhal diarrhœa was y present preceding the fever, and that it was often o say whether the disease would remain catarrhal diarrhœa enteric fever. Now, it seems to me that this catarrh, in to being brought about by atmospheric changes or by food, roduced also from the absorption of the chemical products phoid bacilli growing on the intestinal contents, when n large numbers in either food or drink containing them; this ptomaïn or toxin was only the weapon they used—as

Professor Burdon Saunderson expresses it—in their stru
existence to weaken the vital resistance of the tissues wi
they were in contact, and make it fall an easy prey. W
ever, should the glandular tissue be the first overcome
struggle? The reason seems to me obvious, looking at i
pathological point of view. Adenoid tissue is endowed wi
poor vitality, and very little power of resistance or of repa
infiltrated or choked from any cause. We see this wh
attacked by a similar bacillus, the tubercular one, whose lif
and the readiness with which it infiltrates and destroys g
structures, are somewhat similar to the typhoid one
ways. The epithelial shedding and proliferation of the
membrane which takes place must also weaken the defence
the bacillary invasion. The bacilli find the glandular ti
condition of derangement from the effects of this catarr
becomes the centre of their habitation.

That this invasion is sudden, and followed by rapid ch
the glands, there can be no doubt. Murchison, for examp
infiltration and swelling of the glands in the case of
dying on the second day of the disease, and other observ
similar testimony.

The entire process in connection with the gland, so fa
typhoid bacillus is concerned, from the time of invasion to
disablement of the gland, is over in fourteen days—the nor
of enteric fever from a pathological point of view. After thi
however, a new set of enemies appear on the scene in the
the suppurative micrococci, which, forming colonies on the
or necrotic tissues around the glands, begin to generate the
liar toxins, producing the hectic character of the sympt
temperature with which we are all familiar after the first f
of the disease, so that we must regard enteric fever as th
of the growth in the intestines of two sets of microco
so-called typhoid bacilli producing the symptoms during
fortnight, and the suppurative micrococci producing the
teristic symptoms of its further stages. That other micro
well as these latter, occasionally infect the patient from t
tinal canal, there can be no doubt; and I have at presen
my care in the Mater Misericordiæ Hospital a patient with
marked attack of erysipelas of the face, in the fourth we
enteric fever.

If recent bacteriological work has enabled us to grasp th gard to the disease, we may ask ourselves what practical ns can we draw from them, so as to enable us to treat it. at the disease as primarily a catarrhal one of the intestines, ndarily as one of septic poisoning, our treatment resolves o suitable diet and antiseptics. We know already how allnt is the treatment of enteric fever by bland and unirritating d such as will be mainly absorbed by the stomach and m, leaving little to be dealt with by the lower part of the testine.

medicinal treatment of typhoid by antiseptics is latterly g that amount of attention which our more perfect knowf its bacteriological origin would suggest, and we see ally in the medical journals glowing accounts of the of this method of treatment in the hands of some; while onfess it has not realised their expectations. As far as I am concerned, I have used this method of treatment for ears in both hospital and private practice, and have every be satisfied with the results.

ot profess to believe that it will abort a case of typhoid characteristic fever has begun, but I do assert that it will in the majority of cases, the septicæmia—for it is nothing icæmia with which we have to deal after the second week ever is passed. The typhoid bacillus has by this time done so far as the intestinal glands are concerned, and hereafter only saprophytic bacteria and their effects to deal with. racteristic hectic type of temperature during the third and nt weeks of enteric fever, such as we have in connection purating cavities in the lungs or elsewhere, shows this to be

king for a suitable antiseptic for this purpose, we must ne which will fulfil the following objects:—It must first its effects in the intestinal canal, and not in the stomach; must be thorough, not alone antisepticising the contents owel, but it must permeate the intestinal wall as well, ptic micrococci may have already established themselves, enter the blood. To fulfil these conditions the form of c must be, in my opinion, a gaseous one. We know how he intestines absorb gases, and pass them into the blood. iseptic I am in the habit of using is chlorine in an alkaline as in an alkaline form it mingles best with the contents ntestines, which in enteric fever exhibit a strongly alkaline

reaction. This treatment is not original, as Murchiso
expresses himself in general as dissatisfied with antiseptics,
favourably of chlorine, and regarded it as an admirable me
treatment. He administered it in an acid solution, whic
experience is not so satisfactory. That this method of tre
produces a fall in the temperature, and makes the type
disease milder, there can be no doubt, and in over a fourth
cases, when begun early, it brings the febrile process to
about the fourteenth or sixteenth day.

Murchison, in his careful statistics, found only seven ca
of two hundred to terminate on the fourteenth day by the o
method of treatment, so the cessation of the fever by this
of treatment in such a large percentage must be more than
coincidence.

I do not claim for it that it is the best form of intestin
septic, as more extended experience may enable me to pr
more beneficial one, and I hope on some future occasion t
before the Section the results of my experiments on this su
conjunction with our bacteriologist at the Mater Miser
Hospital.

I have not, in these notes, entered the broader field of æti
theories by trying to explain how enteric fever arises thro
medium of sewers, or sewer gas; or why it is more pr
among the wealthier classes than the poor, or whether it c
as a miasma producing infection through the air—these are
that I did not intend should enter into the scope of m
as I have been content to regard the disease from the b
point of view alone, and to see in it sufficient explanation o
group of phenomena which we call typhoid or enteric feve

ART. VII.—*Some Cases of Enterotomy and Colotomy.*[a] By W
THOMSON, F.R.C.S.I.; Surgeon to the Richmond H
Dublin.

THERE is no more remarkable development of modern
than the impetus that has been given to operative inte
with the hollow viscera of the abdomen. The old terro
even in my student days was held before us all, as to the
certainly fatal results of interfering with the peritone

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[a] Read before the Section of Surgery in the Royal Academy of Me
Ireland, Friday, December 11, 1891.

d; but it was a very real terror with some even then. I
ber the late Mr. Robert Adams once saying to me, after he
en present at an ovariotomy, "Thank God, I never had to
." And his gratitude was a very fair reflex of the feelings
enior surgeons of his day. It was the part of the younger
ith the audacity that belongs to youth, to show that the
lay largely in bad methods, and that there were roads
f followed boldly, but at the same time with care, led to
The success which has attended ovariotomy has been
d by the removal of diseased intestine, portions of the
h, and of the bladder, and with an amount of success that
g the greatest wonders of modern surgery. It is true that
er writers have narrated cases of extraordinary character,
y are few and far between, and they were often the result
dent rather than of selection. But it is to our own time
t refer the deliberate operation upon the intestinal tract as
rally accepted surgical procedure. When Mr. Bryant did
t colotomy in 1859, it had been done only once in London
preceding ten years. The first case I saw was in 1876,
e second was one in which I was the operator. When I
ted I had never seen the operation done in any hospital in
. I mention these points to show that operations upon the
e were not always as common as they are now, and that
comparatively few years they were rarely practised.

e I read a paper on lumbar colotomy in this Section two
go, I have opened the ileum three times, and the colon five
or the purpose of establishing an artificial anus. The two
differ from each other in this—that the ileum cases were
e for acute obstruction, while the colon cases were, with
ception, done when there were no symptoms of acute
tion.

I.—A printer, aged forty; had been the subject of constipation
a year. I was able to make out a tumour in the ascending
lightly movable, and somewhat doughy. In consultation the
ity of this being a fæcal accumulation was accepted, and the man
ated accordingly; but no impression was made upon it. Later
mplained of irritation of the bladder, and an examination of the
revealed a tumour on the anterior wall in the situation of the
. In a few weeks the symptoms of complete obstruction suddenly
ned, and I was obliged to operate. A central incision showed
ent to be the subject of malignant disease. The omentum and

the mesentery were studded with small, dark, shot-like nodule tumour in the ascending colon was about the size of my fist, close above the cæcum. Removal of it, with such an amount of nated disease, was impossible; I therefore determined at once the ileum. The artificial anus was fixed in the abdominal woun ordinary way. The patient never rallied completely, and died hours. The tumour in the rectum was found to be of the same c as the others, which were sarcomatous.

Case II.—The next case was that of a woman aged fifty, been suddenly attacked by pain followed by collapse. She h treated for obstruction by means of belladonna and purgatives benefit. Vomiting continued, the abdomen became distended a panitic, and when I saw her her condition was one of extreme pe was almost pulseless, and we decided to postpone operation for time until stimulating treatment could have some effect. As possible afterwards I opened the abdomen; there was great diff dealing with the distended intestine, and in endeavouring to t obstruction. I was able to feel a thickened, unusual mass sacrum, but I could not bring it up. The patient was almost m and I had to hasten my work; I accordingly opened the ileum a and fixed the artificial anus in the wound. She had great relief fr rallied considerably, and there was a copious discharge from th and I hoped that all would go well; but she began to sink earl following morning, and died in about twenty-six hours after the op At the *post-mortem* examination the obstruction was found. Th a mass of caseating glands over the lower lumbar vertebræ; these had quite broken down. The ileum, near its terminati involved in this mass by old adhesions, and its lumen was reduce size of a goose-quill.

Case III.—The next case was that of a young lady, aged twe whom I saw in consultation with Dr. G. H. Kidd and Dr. F. W She had been complaining for about a year, and had been tre indigestion. When Dr. F. W. Kidd saw her she had considera in the right iliac region, she was much constipated, had oc vomiting, and had an elevated temperature. He discovered a tu the site to which she referred the pain. When I saw her the sy of obstruction had become urgent. The abdomen was distend the tumour could be felt somewhat above the cæcum. There wa tenderness everywhere, and her pain could be kept in subjection the use of morphia hypodermically. We agreed that an operatio not longer be delayed, and the next day I opened the abdomen— Thornley Stoker and Corley, and Dr. F. W. Kidd assisting. Th intestines were greatly distended, and deeply congested. I at onc into the cavity, and examined the tumour; it involved the colon, was firm and fixed, so that it was impossible to move s the surface for further examination. Believing it to be , we agreed that there was no course left but to open the his was accordingly done, and the bowel was fixed in the e. The patient rallied well, and was better next day. Her improved, but the discharge from the bowels never became ere was a constant escape of feculent fluid, which was so acrid in of the abdomen became excoriated over a large extent, in our efforts to protect it. It would be tiresome to give all the this most painful case. Later on she was able to move to the In some months later the symptoms again became urgent, the w in size, ascites set in, and she finally died in January, 1890, after the operation.

t group of cases consists of five, in which I performed olotomy.

.—A labourer, about fifty-five years of age, had complained a for some months, and had been treated by his doctor with tringents. The number of motions daily were as many as e had pain, passed blood, and was emaciated. No examina- bowel had ever been made. On passing my finger into the ound a large ulcerated epithelioma about two inches from the was quite fixed, all the surrounding parts were infiltrated, uestion of removing the mass was put aside. I accordingly to perform an anterior colotomy. A two-inch incision was e linea semilunaris, an inch above a line passing from the o the anterior iliac spine. There was no difficulty in recognis- vel, which was secured in the usual way, and opened at once. t did well, and lived for nine months, when he died from f the disease.

—In July, 1889, a gentleman, aged forty-eight, consulted me diarrhœa. He stated that he had been suffering since the January—that he had been treated for catarrh of the bowels ed liver. He had lost about one stone in weight; the motions twenty at night and six in the daytime. I asked if his rectum een examined, and he said not. On passing my finger into I could just reach the lower margin of a tumour involving wall. I could not detect any ulceration, and he said he had he had not seen any blood. Dr. Ball met me in consultation next day, and after a full examination we agreed that colotomy done. This I did, with the assistance of Dr. Thornley Stoker, I determined to open the colon anteriorly, and at a much

higher level than is usually selected, so as to get as far from t
as possible. The point was somewhat above a line pass
versely through the umbilicus. I selected, as before, the linea se
Here I met with an unexpected difficulty. I found the co
enough, but it was for some time impossible to bring it out of t
Its ligament was extremely short, and when at last I was abl
out a portion of the bowel and fasten it to the skin, there wa
tension that I feared that the stitches would give way prematur
bowel was opened at once, but there was no discharge of fæces
day. The patient was up in about sixteen days, and was abl
to London on business on the thirtieth day after the operat
subsequent history may be told in a few words. For nearly
he was able to discharge very onerous public duties; the bo
perfectly about once a day. In July of this year he had is
abscess, and there was evidence of extension of the tumour d
The liver became involved by secondary deposit; ascites foll
the patient died just two years from the date of the operation.

CASE VI.—An old soldier, aged sixty-three. He had been
from intermittent attacks of constipation for two years, and
treated from time to time in the Whitworth Hospital. The
trace of disease in the rectum. On his last visit (July, 1890)
ment he suddenly became very ill. The intestines were much
and there was frequent vomiting. He was removed to th
hospital, where I saw him. He was much collapsed. An ex
of the abdomen showed great distension of the transverse colon
the splenic flexure. I determined upon an exploration, and c
abdomen high up on the left side, in the linea semilunaris.
intestines gave great trouble, and it took some time to find
which was at last recognised by the fingers grasping a small
mass. Passing up to the splenic flexure, I found a mass of f
There was obviously some narrowing at this part, but I was ab
the mass onwards. The question of opening the transverse
discussed, but the man was almost pulseless, and we felt th
would be seriously imperilled by making a second incision
fæcal lodgment could be moved onwards I believed that the
be kept clear subsequently by the use of medicines and enema
the opening in the colon. I then fixed the gut, and opened
was a free escape of contents. Next day the distension had di
and the vomiting had ceased. The patient made an uninter
covery, and the bowels acted with fair regularity. He died s
later of asthenia, but was not, I believe, troubled by any obstru

CASE VII.—A man, aged forty-two, sent to me by Dr. J
Kennedy, of Tullamore, in June, 1890. For nine months he ha

nate constipation and diarrhœa. At times he suffered much
assed blood. The cause of his troubles was recognised, and
t to Dublin. He stated that he had lost more than a stone in
The diarrhœa was very distressing, as he required to go to the
times 30 times in the 24 hours. An examination of the rectum
hard, rugged, ulcerated stricture which would not allow the
ass through. There was extensive infiltration, and the diseased
were quite fixed to the deeper parts. There was no course
the performance of colotomy. For the first time I did it in
. The loop of bowel was drawn out and stitched through the
muscular coats to the skin. The dressing consisted of iodo-
ment applied under protective, so as to avoid the trouble of
of dressings to the wound. On the fifth day I opened the
clipped away the lips—a perfectly painless process. The
t bed on the eighth day. The diarrhœa was quite stopped, the
charged itself regularly, and the patient was able to leave
three weeks. I have since heard that he suffered once from
which was reduced by Dr. Moorhead, of Tullamore, with some

III.—A woman, aged fifty, admitted August, 1890. Two
she had what appears to have been an ischio-rectal abscess, for
was treated in a hospital. She said she received injections,
the fluid returned through the vagina. Her condition was a
able one. The whole of the buttocks were riddled with open-
e rectum was occupied by a malignant mass, and the finger
assed through the vagina into the bowel. She was disgusted
own condition. I explained to her what could be done, but
isease could not be cured: and as she was most anxious for
f I resolved to open the colon in front. This time I went a
er. The gut was found at once, and drawn out. I then
ick needle through the mesentery, and allowed the ends of the
t to rest upon the abdominal wall, transversely to the wound.
four light sutures fixing the bowel in position in the wound
the operation, which lasted little more than a quarter of an
e bowel was opened three days later, and the patient was soon
.

are a few points which these cases bring into prominence,
I will allude as briefly as possible. It will be noted that,
t group of cases of operation upon the ileum, I lost two
ree; and that in the second group in which the colon was
ll survived. There does not appear to be any special
y the opening of the ileum should be more fatal than

the opening of the colon, if the conditions are the same.
enterotomy, as it is called as distinguished from colotomy, is
doubtedly a very fatal proceeding. Treves collects 61 case
non-malignant obstruction, of which 41 died within 10 days,
24 within 48 hours. In 48 cases of enterotomy in malig
disease, 42 died—28 within 48 hours, and the rest within 10
The reason of this great mortality lies in this—that enteroton
hardly ever done as a deliberate operation, but as a last chan
a case of obstruction in which that obstruction cannot other
be relieved. Then the case is usually an acute one; the intes
have become distended and deeply congested, and there is vomiti
in other words, we add to an already established serious shock
shock of an operation, which involves a search for the obstruc
and finally the opening of the bowel. In two of my cases the pat
were already in a state of collapse when I operated. The
condition almost of necessity exists in all such cases, and u
this accumulation of adverse circumstances, we have rathe
congratulate ourselves when we save any.

Now, on the other hand, colotomy is usually done at a sele
time. There is not any serious obstruction, and all the condi
of time and the preparation of the patient are favourable.

All these cases of colotomy were anterior. On this questi
anterior or lumbar colotomy very much has been written,
probably the result is that there will always remain upholde
each as the preferable method. My own experience is, that
anterior operation is in most cases more easy to perform, and
the position of the opening is more convenient for the patient
in the lumbar region. But it does not always happen, as
seem to think, that we make an incision through the periton
and find the colon quietly waiting to be caught. Very often
a bit of small intestine that presents, and we must search,
search diligently, before we find what we want. Mr. Alling
and Mr. Cripps, who have done the operation frequently,
that the colon is to be found at once only in one-half or one-
of the cases. In this respect the lumbar operation has the a
tage, because the bowel is in more fixed relation to the pri
incision. Then, I agree with Mr. Bryant and Dr. Ball, that
case of much distension the lumbar operation is better, becaus
have not to dread the extrusion of small intestine should we f
hit upon the colon at once.

But the chief claim of the anterior operation must be bas

that it is an abdominal section, which gives us at once
ssibilities. Sometimes it is not easy to localise a cancerous
—such a thing has happened before now of opening the
the lumbar region on the wrong side of the obstruction.
terior opening gives us all facilities in our search; we can
it, we can examine the whole course of the colon—we may
cise a stricture. We may divide the gut completely, invert
es of the lower part, and thus shut off the rectum per-
y from any chances of the irritation of the bowel contents.
y one of these advantages belongs to the lumbar operation,
these reasons I believe that the anterior will gradually
the far more usual one.

last two cases I adopted the plan of dividing the proce-
to two stages, and where there is time this is a great
ge. The parts are completely adherent before the bowel
d, and there is then no fear of the passage of fæces into
omen. In the last case I used the pin for transfixion of
entery, thus, as it were, hanging the intestine in a loop
steel bridge which passed from side to side of the wound.
gament is long enough to allow the bowel to be drawn out
his plan is most simple and satisfactory. The lips of the
und lie close about the gut, adhesions take place in a very
rs, and there is really very little after-trouble. Every-
secure in a few days, and all that remains to be done is to
bowel and pare away the edges—a proceeding which is
y quite painless. But it has the further advantage, that
so shapes the bowel as the adhesions become firm, that a
d "spur" is produced, and there is less likelihood of fæcal
ravelling down to the rectum. I may say, however, that
n one case there was no trouble from this, and that in the
he colon discharged all its contents through the artificial
.

regard to the position of the incision, I have made it at
int above a line passing from the umbilicus to the anterior
spine of the ilium, and always in the linea semilunaris, as
ended by Dr. Ball, because the parts are thin, there is
no hæmorrhage, and the rectus muscle is not interfered
In the last case no vessel was ligatured.

the length of the incision, the smaller it is the better.
with two inches, and extend the opening if necessary.
abdominal wall be fat the wound must be made larger, to

allow of manipulation, unless the colon happens to be at
exposed; but in the majority of the cases the wound was of s
extent, and I certainly do not agree in the advice to make
wound four inches in length at the outset.

On the question as to when we ought to do colotomy for ca
some difference of opinion exists. Ought we to operate at
when the disease is discovered, although the symptoms may n
urgent, or must we wait until we are forced to do so? Malig
disease of the rectum is very insidious, and has usually
progressing slowly before the surgeon is consulted; but the
that the necessary examination is made, and that the disea
discovered, show that there are already special symptoms pr
to indicate it—constipation, diarrhœa, wasting, pain, or b
stools. The growth has reached a stage in its development
it manifests its presence, and has passed out of the period of
and undemonstrative progress. I have myself no doubt th
any of the symptoms mentioned has become marked, and tha
disease is recognised—always assuming that it cannot be di
removed—colotomy ought to be performed without much
It is reasonable to suppose that in a disease such as this the pa
of fæces over it does not act as an emollient, and that the fre
action of the sphincters does not tend to soothe it.

One of the most frequent causes of epithelioma is cont
irritation. We recognise that fact in all our practice, and w
to remove it. Rest is an important therapeutic agent elsew
why should it fail to be beneficial in the rectum? Theref
think that those who would wish to postpone the day of oper
perhaps deterred by the risk, are hardly giving effect t
principle which underlies their practice on other regions. A
present moment the anterior operation shows a mortality of 5
cent., and the lumbar of 31 per cent.—both sufficiently hi
leave much room for improvement. But I think that if we
all particulars of the cases we should find many in which oper
comes in as a last resource—when there was the shock of
obstruction already present, as in my own enterotomies, and
everything favoured failure rather than success. Early ope
can be done under the best circumstances. The advance o
disease is no longer helped by direct and increasing irritatio
comfort of the patient, as compared with his frequently tr
some diarrhœa or temporary obstruction, is secured as far a
possible, and life is prolonged. For these reasons I belie
shall do best if we decide for action and not inaction.

PART II.

EWS AND BIBLIOGRAPHICAL NOTICES.

: its Natural History and Prevention. Being the
Lectures delivered before the Royal College of Physi-
London, 1891. By R. THORNE THORNE, M.B. Lond.,
., F.R.S.; Assistant Medical Officer to her Majesty's
Government Board, &c. London: Macmillan & Co.
Pp. 266.

much pleasure that we welcome this edition of Dr.
aluable Milroy Lectures. The work is well worthy of
reputation, high though it be already, and the subject
he most important that could be chosen. Diphtheria,
orne shows, is steadily, if not rapidly, extending its
nong us, and, as yet, we seem unable to cope with it
. Sanitary works, cleanliness, and other hygienic
have considerably diminished the mortality from the
zymotic" diseases, whereas none of our modern improve-
checked the spread of diphtheria. Under these cir-
, although it may not yet be possible to clear up all
ies connected with this disease, the first step towards
nt is to ascertain clearly the present state of our
and on this subject Dr. Thorne's lectures will be found
tandard authority.

rne calls attention to the change in the distribution of
which is taking place. Formerly the disease used to
e rife in sparsely-peopled districts than in towns and
calities. For some time past, however, a specially-
rease of its incidence is in progress in large cities and
e disease is becoming, in fact, one more and more affect-
populations.

gard to the influence of soil, site, and locality on diph-
read—"Soil, and especially *surface soil*, when considered
tion with relative altitude, slope, aspect, and prevailing
as, I believe, concern in the maintenance and diffusion

of diphtheria, and has very possibly some relation with its b
nings. Speaking generally, I think that the experience of ca
investigations extending over a number of years is to the
that when a surface soil is, by reason of its physical conditio
topographical relations, such as to facilitate the retention of
ture and of organic refuse, and where a site of this character
addition exposed to the influence of cold wet winds, there
have conditions which do tend to the fostering and fatali
diphtheria, and which also go to determine the specific quali
local sore-throat."

There are several tables illustrating the importance of ag
season; the greatest number of cases, both actually and relat
both fatal and non-fatal, occurring between the ages of thre
twelve years, and the disease being most prevalent during O
and November, then subsiding slowly, and being least frequ
met with from May to July. All this statistical mate
worked up with the greatest care, and will repay study.

In the second lecture Dr. Thorne calls attention to the
difficulty which is met with in attempting accurately to defi
disease "diphtheria." Before and at the commencement of
epidemics of this disease many cases of ill-defined throat-d
are met with, and many such occur also during and afte
regular epidemic. "Are affections of this ill-defined and
rently trivial kind capable of passing, by a process of develop
from an innocent to a specific form of throat-disease? or is it
the local mischief they occasion provides a soil favourable
reception and multiplication of the contagium of diphthe
Dr. Thorne seems to hold both of these views. He believe
there may be a progressive increase in virulence—"a progr
development of the property of infectiveness"—until the epi
culminates in true diphtheria; and also that there is su
important relationship between diphtheria and a morbid con
of the mucous membrane of the fauces as to intimate some
whether the contagium of diphtheria ever finds in a throa
mucous surface of which remains unabraided and unalter
reason of local disease or otherwise, the soil necessary either
progressive maturation or to the production of those s
changes which follow on its reception and multiplication.
not see any reason why both of these views should not be
On the one hand we know by experimental research that the
micro-organism can vary enormously in virulence, and th

ss can be artificially increased or diminished—for he same organism which often produces boils or simple us abscesses can produce affections of every degree of ntil, in its highest virulence, it produces, when intro- a living body, the most rapidly fatal blood-poisoning.[*] her, many instances are known in which one organism, k, opens the door by which a second organism obtains nto the tissues and organs.

ction with the last-mentioned subject is the question of ty or otherwise of scarlatina and diphtheria. The d observations of several authorities—Bond, Parsons, d others—are quoted. Dr. Thorne thus sums up:—

> ng at once strikes the reader, and that is the marked sequence s narrated. It is the scarlatina that almost always takes the of the diphtheria. The few instances in which the reverse nay easily be accounted for by the well-known circumstance fferent infectious fevers may run their course synchronously person, the characteristic features of both undergoing some s. And I would submit that just as is the case with regard pecific forms of sore throat to which I have referred, so also f scarlet fever does the morbid condition of the fauces supply ourable to the reception of the diphtheria contagium, the hroat thus acting as a predisposing cause to diphtheria."

gard to the relation between faulty sanitary circum- d occurrences of diphtheria, Dr. Thorne's views are and are at variance with those generally held. He would at once say that no trustworthy evidence is g to show that polluted water supplies have ever caused ; whereas, on the other hand, there is abundance of vidence in the opposite direction." With regard to luted air, he regards it as operating in much the same scarlatina poison—viz., by causing non-specific sore- in some other way preparing the human system for the f the specific infection of diphtheria.

d lecture chiefly treats of the relation of diphtheria to ing together of children in schools. Among these iphtheria seems to prevail more than among any other that for several reasons. These children are at the ptible period of life; they are closely arranged side by ilation is often imperfect; faulty sanitary surroundings

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[*] Levy. Archiv f. Exper. Pathol. u. Pharmakol. 1891.

often cause non-specific sore-throats; children, especia
kiss one another, and are apt to transfer sweets from r
mouth. Dr. Thorne suggests that the recent increase of d
may have a connection with the increase in the number of
who attend school regularly.

The practices of kissing patients suffering from an i
disease and of carrying them in the arms are alluded to
cases of diphtheria have been caused in this way. "In
pital there is a rigid rule that no diphtheria patient shall
or carried about, and in that institution no nurse has f
series of years contracted the disease. In another, regul
like stringency are not observed, and nurses tending the
infrequently endeavour to alleviate the distress of th
patients by fondling them and carrying them about, an
institution diphtheria among nurses has all but amount
epidemic prevalence."

In the fourth lecture a careful account is given o
epidemics in which it was ascertained that milk was th
by which the virus was conveyed. Dr. Thorne comes to
clusion that the milk derived its infectiveness directly
cows; that milk derived from cows suffering from an a
trifling disease, a condition called "chapped nipples," may
diphtheria in human beings and other susceptible anim
cats. A long account is given of Dr. Klein's researches
point.

In the last lecture some useful hints are given on the p
of the disease—*e.q.*, isolation, the closing of schools, the s
examination of the throats of the children, disinfectio
milk before using it, &c. The last point—boiling r
Thorne lays much stress on. There are three appendices
ing Local Government Board directions as to closing
schools, and on the general methods to be adopted
attacked or threatened by an epidemic.

The whole book is very well written, and extremely in
and contains the best account we have as yet obtain
natural history of diphtheria. There is only one matter
we could wish Dr. Thorne had seen his way to compile
differently. It is written too much from the standpoi
Medical Officer of the Local Government Board. Loca
ment Board Reports are the source of most of the q
and Government inspectors are the authorities mos

We regret this narrow standpoint. If the author could n a wider view of the disease, if he had alluded more he foreign experimental work which has been done in with this subject, if he could have paid rather more to the rest of the world outside England and Wales, we is book would have been even more valuable than it is.

RECENT WORKS ON TREATMENT.

tique journalière des Hôpitaux de Paris. Par le PRO- R PAUL LE FORT. Paris: J. B. Baillière et fils. 1891. .

reatment of Typhoid Fever, especially by "Antiseptic" es. By J. BURNEY YEO, M.D., F.R.C.P.; Professor of Therapeutics in King's College, London, and Physician Hospital. London: Cassell & Co. 1891. Pp. 70.

bing and Treatment in the Diseases of Infants and Children. LIP E. MUSKETT, late Surgeon to the Sydney Hospital; y Senior Resident Medical Officer, Sydney Hospital. rgh and London: Young J. Pentland. 1891. Pp. 293.

ber's Companion. By THOMAS SAVILL, M.D. Lond., P.; Medical Superintendent of the Paddington Infirmary. Edition, revised by the author, assisted by T. E. HILLIER, M.A., Cantab. 1891. London: John Bale & Sons.

SSOR LE FORT has earned a debt of gratitude at the ll practical physicians by focussing in his little work the reatment entertained by the most brilliant living repre- of the French school of medicine and surgery.

rk, described on the title-page as an "aide-mémoire" mulary of applied therapeutics, embraces 518 opinions st novel and varied cases by no fewer than 135 practi- Among them we find such names as Ch. Bouchard, Debove, Dieulafoy, Dujardin-Beaumetz, Alf. Fournier, . Félix Guyon, Hallopeau, Hayem, Jaccoud, Landouzy, gue, Ledentu, Peter, Pinard, Potain, Germain Sée, Paul Tarnier, Terrier, Tillaux, Verneuil, &c.—truly a goodly

an of the book is this—a disease is named in alphabetical order. Under each such entry authorities and their metho treatment are then given—a uniform classification being adopt facilitate reference, under the headings of local treatment, ge treatment, regimen, and prophylaxis. Examples of the e are: Antisepsis, dressing of wounds, diseases of the nervous sy the digestive system, the heart and circulation, the chest, f and so on. We have repeatedly referred to this book sin publication and never without profit and satisfaction.

2. Dr. J. Burney Yeo's *brochure* is a valuable contributi the literature of the treatment of enteric fever. Its object point out the importance of securing general and local anti in this fever—more especially the latter—that is, intestinal sepsis.

It may, perhaps, be necessary to explain that, in the wor Dr. Yeo, "the idea of an *antiseptic* treatment of certain for disease has been greatly misunderstood or intentionally misr sented by those who for some inscrutable reason dislike it; those of us who have been bold enough to entertain this idea been credited with the crude intention of attempting to slay parasitic morbific agents 'in a direct and simple manner,' a have been gravely told that our so-called antiseptic method so murderous that our patients and not the microbes fall vi to them." Dr. Yeo shows that every analogy in nature poi the possibility of effectually modifying the life-history and act of all living things by even slight modifications of their env ment. The real aim of the antiseptic treatment of the inf diseases is to modify or counteract the injurious activities o living parasitic agents of these diseases. Antiseptic methods may act either by preventing the formation of the pois animal alkaloids, or ptomaïns, to which pathogenic microbes or are believed to give rise; or by destroying these ptomaïns formed; or, lastly, by promoting their discharge from the bo

After giving a very full account of the various means emp to secure intestinal antisepsis, Dr. Yeo proceeds to speak hig the value of free chlorine in enteric fever—a remedy r mended long since by Sir Thomas Watson and more recent Murchison.

The liquor chlori of the Pharmacopœia may be prescribed minim doses with the mineral acids, or we may prepare a solution of chlorine gas as recommended by Dr. Yeo.

"Into a twelve-ounce bottle put thirty grains of powdered potassic lorate, and pour on it 40 minims of strong hydrochloric acid. Chlorine s is at once rapidly liberated. Fit a cork into the mouth of the bottle, d keep it closed until it has become filled with the greenish yellow s. Then pour water into the bottle, little by little, closing the bottle, d well shaking at each addition until the bottle is filled." . . . "To elve ounces of this solution for an adult, I add twenty-four or thirty- grains of quinine, and an ounce of syrup of orange peel, and I give ounce every two, three, or four hours, according to the severity of case."

Dr. Yeo says that this is pleasanter to take than the official or chlori. The tongue cleans quickly, and the fœtor of the cuations subsides. Dr. Yeo thinks that we obtain not only an stinal but also a general antisepsis by this treatment.

We should not be doing justice to Dr. Yeo did we lead our lers to suppose that his "lecture," for such it was in its original n, is intended merely to sound the praises of the chlorine treat- t of enteric fever. As a matter of fact, in it will be found a y complete account of the antiseptic treatment in general, ding diet, management of the sick-room, and kindred topics.

Mr. Muskett's book hails from the Antipodes, but was printed published in Edinburgh. Two quotations face the title-page give the key to the *raison d'être* of the work. They are from Charles West and Sir William Jenner respectively, and run —"Children will form at least a third of all your patients," "When you see a sick child, don't always think of grey lers."

ening with a list of works referred to in the text, the book vided into three parts. The first gives the drugs in alpha- al order, with the dosage and therapeutics of each in the ses of infants and children. A vast number of elegant for- e will be found in this part. The second part is devoted to treatment of disease in infants and children—the different ses (both medical and surgical) being now entered in alpha- al order. This division of the book is by far the largest and pies nearly 200 pages. The entries are really very full and he whole satisfactory. Under the heading "Scrofula," we of the "*alphabetical quadrilateral* of health"—namely, bath- clothing, diet, and exercise. In this same article the author es with approval Dr. Angel Money's fanciful description of

the soles of the feet—"those nervously sensitive extern
A short third part includes a number of useful diete
or, as Mr. Muskett calls them, "recipes."

The whole is wound up by a very copious index, in
ever, both drugs and diseases are mixed up in a some
gruous and inconvenient way: for example, "chicke
immediately followed by "chicken pox." May we su
author to have two separate indexes in his second edi
early appearance of which we look forward with confid

4. Dr. Savill's booklet contains, in the first instan
number of selected prescriptions which he has found
in his private, hospital, and infirmary practice, as well
the doses and strengths of the more powerful officia
official drugs, in the most condensed form which was p

The second part contains tables of weights and mea
on ventilation and warming, disinfection, baths, pr
bedsores, massage, electricity, infant feeding, and m
therapeutical information—the whole forming a wonder
of literary condensation.

On the Simulation of Hysteria by Organic Disease of
System. By Thomas Buzzard, M.D., Lond.;
Fellow of King's College, London; Physician to th
Hospital for the Paralysed and Epileptic. London
Churchill. 1891. Pp. 113.

There is probably no purely medical question which
difficult to decide than whether a case of nervous dise
nature hysterical (functional) or organic; and there
which the correctness of the diagnosis is of more impo
for prognosis and for treatment. Dr. Buzzard's little
attempt to aid the practitioner in coming to a right
Its object is to draw attention to the frequency
symptoms, liable to be looked on as hysterical, are f
really due to structural changes in the nervous system.
is entirely clinical in character; a considerable numb
are narrated, including, in the majority of instances,
history. The clear, accurate, and interesting narratio
cases adds much to the value of the book.

Dr. Buzzard first describes a number of cases of a for hich he believes has not hitherto been noticed, and in ll of which the question arose as to the functional or nature of the affection. In these cases the weakness tself in inability or difficulty in flexing the thigh on the The patients could walk, more or less, but had difficulty in stairs or in raising the foot on to a chair. The reflexes rical reactions in the legs were normal, and many of the l been believed to be hysterical. Dr. Buzzard, however, that they were due to an isolated Atrophy of the Ilio-scle.

ext point he calls attention to is the importance of the of the knee-jerks in a young woman. Several cases, y thought functional, are described, in which this symptom nt, and which, as the result showed, were cases of h's ataxy. The clinical features of disease are strikingly forward.

ome remarks on Urinary Troubles in functional and organic attention is drawn to the importance of the Plantar "It is a rule of almost universal application, according to ience, that the plantar reflex is either entirely absent or bly indeed expressed in cases of hysterical paralysis. s by perseverance in very elaborate titillation of the foot-reflex is produced, and occasionally it is easy to see that leal of voluntary action is expended in restraining the contraction. But usually there is a simple absence of ar reflex, the stimulus being felt as a touch only, even in ho are naturally very ticklish." "Its presence affords rong presumptive evidence in a doubtful case of the being of organic, not simply functional, character. It is g to observe that it will sometimes be observed to be ly on the side affected with hysterical paralysis, where nfined to one lower extremity." Several very interesting described, illustrating these points.

egard to the so-called Tendon Reflexes, we are glad to see Buzzard states that in hysterical paraplegia these reflexes ncreased, and ankle-clonus may be present. In some of known works on nervous diseases, the importance of the enomenon is, we believe, estimated much too highly; it is its presence is almost a positive proof of organic disease—hich we agree with Dr. Buzzard in thinking erroneous.

st of the book, more than 60 pages, consists of an interesting

and valuable discussion on the differential diagnosis between
terical Paralysis and that due to Disseminated Sclerosis—a su
“which is apt to offer diagnostic problems often of almost inso
intricacy.” A large number of cases of disseminated scle
often extending over many years, are related, in which at firs
diagnosis of hysteria had been made, and we are told how
gradually—perhaps after lengthy periods of improvement
characteristic signs of the disease manifested themselves.
points of most importance to which Dr. Buzzard draws atte
are the following:—“An alleged sudden loss of power in a li
an apparently young female, a localised numbness, or ‘pins
needles’ sensation, or a complaint of loss of sight in one ey
symptoms familiar enough as expressions of functional tr
But they are, no less, modes in which organic disease of the
which we are discussing is very apt to make its first appear
These local symptoms may clear off after a short time, ju
would be the case if they were of hysterical origin. Th
recovers her sight or the use of her limb, and nothing m
heard of the numbness. A little later, perhaps, loss of sight i
other eye is complained of; a ‘pins-and-needles’ sensati
described in some other parts; another limb is said to be
weak. The opinion that the symptoms are due to hysteria
very possibly appear to be confirmed by this re-appearan
trouble in other situations; or the patient complains, perha
weakness and stiffness in both legs, which increase so that i
or eight weeks she cannot stand. Then comes a rather
improvement, so that she recovers her power completely. S
or later—in some cases after an interval of years—the f
of power recurs. After recoveries and relapse of this kin
characteristics of confirmed disseminated sclerosis show themse
“In a doubtful case the persistence of plantar reflex s
distinctly weigh in the direction of a diagnosis of organic di
its absence lending support to the view that the affection is
tional.” “I cannot help thinking that the view still gen
held that a shifting of loss of power from one limb to anot
characteristic of hysteria is quite an error. The hysterical w
who has lost all power in her legs will, it is true, very often
on (whilst still paraplegic) lose the power of one arm, usuall
left; but I have not found that she is prone to lose the pow
a limb, then recover it, and then lose it in another. It s
me that the idea of this shifting powerlessness being str

tory of hysteria has arisen from mistakes in diagnosing ria cases of disseminated sclerosis. And equally so, the ce of numbness, 'pins-and-needles' sensation, sometimes at and sometimes another, points with considerable distinct- lisseminated sclerosis." "We shall find, I think, that the l patient, as a rule, when loss of sight of an eye is in , is quite blind on that side, and has usually become blind, whilst the patient with sclerosis has only more or urity of vision which has come on somewhat gradually." isposed to place on the tremor or intentional movement a ic value higher than that possessed by any other symptom ainated sclerosis. I cannot call to mind one case in which ptom was present which the sequel proved was simply al."

are many other important diagnostic points to which zard calls attention, but we have mentioned enough to e valuable nature of the work. The numerous cases l at length, and illustrating the various points touched on, a charming and most interesting book to read. We have much enjoyed it, and we warmly recommend it.

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f Clinical Medicine. By BYROM BRAMWELL, M.D.;
.P., Edin.; F.R.S., Edin.; Assistant Physician to the
urgh Royal Infirmary; &c., &c. Vol. I. Parts II. and III.
urgh: Printed by A. & T. Constable at the University
1891. Folio. Pp. 48, and 44.

a gratifying task for us to review the first part of this work in the number of the Journal for June, 1891 (Vol. age 522). On that occasion we expressed the opinion Atlas reflected the greatest credit upon author and pub- ke. This verdict is confirmed by a study of the second l parts, which have since then been placed in our hands. e of the third part was unavoidably delayed in consequence ack of influenza, from which the author suffered. Part omised for the 1st of May, 1892.

ope of the work has been already indicated in our former nd it only remains for us on the present occasion to men- topics which are discussed in the second and third parts. I. opens with a detailed description of Addison's disease, a typical case of the malady and on two cases which resembled it. Dr. Byrom Bramwell strongly inclines to the that the typical fibro-caseous lesion of the supra-renal capsu tubercular. The theory as to the manner in which this l produces the symptoms of Addison's disease which seems to most satisfactory is that which supposes—(1) that the lesi the capsules is primary; (2) that as a result of that lesion nervous structures in the neighbourhood of, or connected witl capsules are implicated; and (3) that it is to the nerve dis ances produced in this manner that the symptoms of the di are for the most part due. The clinical case upon whicl Bramwell's remarks are based is illustrated by two exq coloured plates lithographed by Messrs. M'Lagan & Cummir Edinburgh. The first of these is a portrait of the patient, a y lady aged twenty-six. The second shows the bluish-black (b berry-juice-coloured) pigmentary deposits on the tongue of patient and also the deep pigmentation of the nipple and the a of her right breast.

The remaining topics discussed in this part are diffuse mela sarcoma, with pigmentation of the skin, and "Hodgkin's dise or lymphatic anæmia. Of the latter an exhaustive descripti given, including especially valuable remarks on the differe diagnosis of the affection.

Part III. may be held to surpass both its predecessors in in tance and interest. Furthermore, it is illustrated by no f than twelve plates—coloured, or in black and white, or phot vure. It includes monographs on Progressive Unilateral Atr of the Face, Chronic Progressive Bulbar Paralysis (followed case of Paralysis of the Lips and Tongue), Ophthalmoplegia, luscum Fibrosum, and Xeroderma Pigmentosum of Kaposi (l

In his account of progressive unilateral atrophy of the face Byrom Bramwell makes no allusion to the earliest observatio this rare form of disease. It was first described by Rombe Berlin, in 1846, under the designation of a "New Form of Atr of the Face." To the *Archives Générales de Médecine* for 1852 (page 51), Dr. Ch. Lasègue contributed an intere account of the malady. A translation of his paper, by Dr. W Daniel Moore, will be found in the fourteenth volume of *Dublin Quarterly Journal of Medical Science*, August, 1852, 239. It is immediately followed by an abstract of a case of gressive muscular atrophy reported by M. Gallard, clinical at the "Hôpital de la Pitié;" as well as by a case of unil

of the face detailed by Dr. Moore himself—the patient being
nan aged nineteen at the time he first came under obser-
It is interesting to notice that the term "trophoneurosis,"
by Romberg for the disease, was introduced by Dr. Schott,
cted one of Romberg's cases for the subject of his gradua-
is in the University of Marburg, in the year 1851. The
his thesis was: "Atrophia singularum partium corporis,
causâ cognitâ apparet, *trophoneurosis est.*"

are, probably, no other illustrations of the skin disease
by Kaposi in 1870 under the term "xeroderma pigmen-
which convey such an accurate idea of this rare and
ffection. It is essentially characterised by the develop-
those parts of the body which are usually exposed in
of—(1) pigmentary deposits; (2) localised atrophic
(3) localised vascular dilatations (telangiectases); (4)
is; and (5) warts and papillomatous or epitheliomatous
hs.

amwell's account of ophthalmoplegia is also worthy of all
The case he describes is that of a little girl, aged two and
ears, in whom there was no definite history of either
r tubercle. The patient made a complete recovery,
ken 5-grain doses of iodide of potassium three times a
t continuously (not "continually," as Dr. Bramwell has
ear.

ew descriptive allusions to the contents of the second and
ts of the "Atlas of Clinical Medicine" will prove the
value of the work, which reflects the highest credit
istinguished author.

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n clearly Explained, Treated, and Dieted, with Special
s on Gout, Rheumatism, and Obesity, and Chapter on
of Infants. By THOMAS DUTTON, M.D. Univ. Durh.,
S.E., &c. London: Henry Kimpton. 1892. Pp. 143.

not a book written for medical men or students; it is
o be a popular work on indigestion, and its object is to
he public on this important subject. The author believes
e public are to some extent educated as to the structure
ions of the body in which they live, and as to the nature
f the most common diseases, together with the means of
or alleviating them, they will be less prone to quackery

and various kinds of folly. In this view we agree with him; but when he supposes that the education of the public will be advanced by the little book before us, we are compelled to disagree with him.

We cannot congratulate Dr. Dutton on his book. It appears to us to be confusing and ill-arranged, and we do not think that an ordinary reader will gain much by its perusal. The directions and hints given are too vague to be of much practical use. In some respects, also, it reminds us of the novels that come out by instalments in the weekly journals—when we reach the middle of a peculiarly exciting scene we read "To be continued next week;" so with Dr. Dutton's book, and even more so. On several occasions when we think we are coming to some important practical directions or hints, the author branches off elsewhere, and we cannot even hope to gain the critical information next week.

Some of Dr. Dutton's facts are curious. We read that the chief function of the liver is to secrete bile; this bile is an excrementitious fluid, by which the excess of carbon and hydrogen not used up by the respiratory combustion is separated from the blood. We find nitrogenous food divided into vegetable (wheat, oats, and other cereals) and animal (meat, &c.), and saccharine or amylaceous foods find a separate place for themselves—a singular position in which to place cereals.

We do not recommend this book either to the professional or to the general reader.

The Harveian Oration on Harvey in Ancient and Modern Medicine. By W. H. Dickenson, M.D., F.R.C.P.; Senior Physician to St. George's Hospital, &c. London: Longmans, Green, & Co. 1891. Pp. 34.

The first part of this Harveian Oration is semi-historical, treating of Harvey and his times, and moralising thereon. The author fears it is commonplace. We sympathise with him in his fears. This portion of the oration reminds us forcibly of the leading articles we read day by day at our breakfast tables. That it is commonplace is due to no fault of its illustrious author. But when already 172 orations have been delivered on this theme, how could anybody approach the subject except with the sense of "sore discouragement," which Dr. Dickenson says he felt?

In the second part, the author explains his views as to renal

He believes that the dropsy of acute nephritis is to some not mainly, mechanical in its nature. The high arterial due to obstruction; the obstruction is beyond the minute f the retina and brain, as is shown by their often bursting pressure to which they are subjected by their contents. ruction must be in the capillary system, whether from f blood *per se*, or from vascular contraction engendered overcome this obstruction the heart beats more forcibly; accumulating systolic force behind and stoppage in front, transudation would seem to be inevitable. Dr. Dickenson re may be as well some secretive process on the part of ary walls, but that this is uncertain. The dropsy of right's disease is, Dr. Dickenson says, cardiac as much and is due to failure of heart-power. This view as to of chronic nephritis we have long held. The view of l dropsy is more novel. We are much pleased to read nson's announcement that he intends to bring it in a nded form before the medical public.

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e Domestic Animals. Being a complete Treatise on the n of the Horse, Ox, Sheep, Hog, and Dog. By Rush N Huidekorper, M.D. Philadelphia and London: avis. 1891. Pp. 210.

eatise before us we have further evidence of the good is being done by those who devote themselves to the eterinary medicine, and now that the treatment of disease is placed upon a sound scientific basis, we may look for results from the investigations in the region of comparalogy.

ht naturally be expected, about three-fourths of Dr. per's book is occupied with a description of dentition of —the author giving a careful account of the anatomy, which the different teeth erupt, and the irregularities they are liable. In the chapter on cribbing, by means pages of illustrations, the evil effects of this vice are l in a simple manner which could, with difficulty, have e through the medium of letterpress. There is also a n which the various tricks of the trade are exposed, or we ought to say the different operations which dealers n the teeth of horses when they wish to falsify their age.

The teeth of oxen, sheep, goats, hogs, and dogs, also rec
share of attention, the study of their teeth being simplified by
has been already said with regard to the teeth of the horse.

The last chapter in the book, devoted to a short descript
the teeth of man, is interesting, as our author evidently appr
the subject from a veterinary standpoint. The determinat
the age of the human animal from an examination of the te
we venture to think, liable to many sources of error, and not
such a simple matter as in a "rising three-year-old"—the
of eruption of the "tushes" and bicuspids in man being q
likely to vary as to agree with the times usually laid down i
books for their appearance.

Dr. Huidekorper's work is nicely got up and profusely illus
Its perusal will well repay those who desire to ascertain the
an animal from an inspection of its mouth.

A Dictionary of Treatment, or Therapeutic Index, including
and Surgical Therapeutics. By WILLIAM WHITLA,
Professor of Materia Medica and Therapeutics in the Q
College, Belfast; Physician to, and Lecturer on, Clinical
cine, Belfast Royal Hospital, &c. London: Henry Re
1892. Pp. 948.

WE have long held the opinion that in most text-books on m
directions as to treatment are not given with sufficient det
preciseness. For example, we read in the preface to one
best-known and most widely-read text-books of medicin
seems to me best, having inculcated general principles, and
out the specific virtues of certain drugs, to leave the young
tioner generally as unshackled as possible with regard to his
of particular combinations and modes of administration."
this course may have some advantages—the writer just
believes that the young practitioner will be more likely to
a thoughtful physician, and to benefit his patient, if he ada
drugs and his methods to the exigencies of cases as they
themselves before him, than if he follows the stereotyped pro
of some predecessor—still it frequently leaves one rather
in the midst of difficulties. The present writer well reme
when he was resident medical pupil in hospital, how diffic
found it to evolve suitable prescriptions out of bare lists of
given in works on medicine, and he knows that many other

students have been in a like situation. But the need of detailed directions as to treatment is not confined to the senior student—every medical man, no matter what his knowledge of the properties of drugs and his experience of their use may be, will be benefited by occasionally comparing his modes of treatment with those of his neighbours. It is almost impossible, especially if a doctor lives in a country-place, where he does not often meet other medical men, to avoid getting into a purely routine mode of treatment; and we believe that such a habit is highly injurious. To refer at times to the therapeutic measures employed by other men will tend to keep our own views from becoming narrow.

To all the classes of medical men to which we have referred—to students, to junior and to senior practitioners—we heartily recommend Dr. Whitla's "Dictionary of Treatment." This work grew out of an attempt to append a Therapeutic Index to the author's well-known work on "Pharmacy, Materia Medica, and Therapeutics." It was soon evident that a mere enumeration of the drugs suitable to the treatment of each affection would be of but little use unless the list was accompanied by some expression of opinion regarding the relative value of each drug, and of the different methods by which it might be employed. Dr. Whitla resolved to make his work as valuable as possible, and the result is the present volume of nearly 1,000 pages.

In it the various diseases and many symptoms, not diseases in themselves, but from this importance requiring special mention, are alphabetically arranged, each with full details as to treatment. Dr. Whitla generally describes his own favourite method first, and then those of other writers; but everywhere his personal opinion is apparent, pointing out advantages in this treatment, dangers in that, and so on, whereby the value of the book is much increased. The treatment is very fully given—thus, typhoid fever occupies more than 16 closely printed pages; eczema, 9 pages; piles, nearly 6; ovarian disease, 11; and these are merely examples taken at random. The treatment of surgical diseases is in some cases given more briefly, and in more general terms than that of medical affections—thus, the treatment of fractures is only described generally, and without reference to particular fractures; in other cases—*e.g.*, hernia—the article is full and detailed. The indications for the use of many of the recently introduced drugs are clearly given, and the time and mode of using operative measures—*e.g.*, tapping in pleurisy—are fully set forth. In most cases dietetic

and climatic treatment is fully described, as well as that by d
but in a few cases—for example, anæmia and Bright's disease
thought the directions as to food lacked definiteness, and
somewhat incomplete.

A large number of prescriptions are given, many of which
in Latin, with the directions as to using in Latin also.
think this Latinity is a mistake; we believe it to be far
reasonable to write directions in good English than in bad L
which in its turn has to be translated into English by the apothe
Besides, if Dr. Whitla had been less ambitious, and had con
himself to his native language, he would have avoided
mistakes which disfigure his pages. We do not know by
stretch of grammar "dum effervescentia" in the following dire
"Capiat, ℥i. cum, ℥ss. succi limonis dum effervescentia qu
horis," could be parsed, or could stand for "during effervesce
Is not "horas tres postea" (three hours after) a rather awk
phrase, instead of "post tres horas?" All this foreign lang
may be Official, but it certainly is not Latin; and the sooner
pages of excellent and valuable works cease to be disfigured
this barbarous Official language the better.

Another matter to which we object is to spoonfuls, both
dessert, and tea—cochlearia magna, and minima. We all
how greatly one tablespoonful, for example, differs in cap
from another—our own tablespoons contain exactly one
each. We think it would be much better, and more conduci
exact dosage, to give doses by measure, not by spoonfuls; or
to have the bottle divided into the requisite number of por
by a mark down one side.

But these points, which we could wish altered, are, after all,
few and unimportant, and by no means lessen our very
opinion of this "Dictionary of Treatment." It is clear, read
and well up to date; the views put forward are sound and
considered. It is eminently a book to be kept on the tabl
frequently referred to, and we feel confident that the medical
who purchases it and uses it frequently will not regret having
so. We have nothing but admiration for Dr. Whitla's ind
and perseverance—for such a work as this must have ent
enormous labour on him—and we warmly congratulate him o
success of his undertaking.

Tooth Extraction. A Manual on the Proper Mode of extracting Teeth, with a Table exhibiting the Names of all the Teeth, the Instruments required for Extraction, and the most approved Methods of using them. By JOHN GORHAM, M.R.C.S.E. Third Edition. London: H. K. Lewis. 1889. Pp. 44.

SURELY the time has come when students should no longer be allowed, with primitive instruments, to find out for themselves as best they can how teeth are to be wrenched from living human jaws. The services of a dental surgeon, to instruct and supervise students in this branch of their art, ought to be available at all our general hospitals, and in many a remote country district the doctor will be thankful for the skill and information he has acquired in this subject in his student days.

Those who have not had the advantage of special instruction, will find, if they read Mr. Gorham's manual, that in the short space of forty-four pages are condensed many valuable hints on the extraction of teeth. We earnestly commend this book to the attention of students and those practitioners who are located in regions where their services are required in all branches of surgery.

EUROPHENE.

A NEW antiseptic vouched for by an admiring multitude of surgeons as the long-sought ideal remedy is europhene, otherwise isobutylorthocresol-iodide—the reader may use either, but if in a hurry when writing his prescription the former name would occupy less time in spelling and would probably be less puzzling to the compounder. This new chemical which is to replace iodoform, iodol, aristol, phenol and all the other invaluable agents of this class is the discovery of W. Siebel, and its therapeutic value is proclaimed by von Eichoff. It is an amorphous powder, of a yellow colour, with an odour of saffron; insoluble in water and glycerine; slightly soluble in alcohol, ether, chloroform, and oil. Dogs have taken large doses of the chemical and appeared unaffected by it, hence it is declared to be non-poisonous. Fifteen grains administered to a patient produced only the effect of heaviness or weight in the stomach. When administered internally iodine is detected in the urine. Europhene is recommended to be used as an ointment of 1 per cent. or 2 per cent. strength. A solution of it in olive oil 1 per cent. is used hypodermically for secondary and tertiary syphilis. The pure chemical applied as a powder is said to cure lupus, and the ointment is beneficial in the treatment of varicose ulcers, eczema, psoriasis and favus, if we accept the German statements.—*La Semaine Médicale*, July 25, 1891.

PART III.

SPECIAL REPORTS.

REPORT ON
MATERIA MEDICA AND THERAPEUTIC

By **Walter G. Smith**, M.D. Univ. Dubl.; Physicia
Patrick Dun's Hospital; King's Professor of Materi
and Pharmacy, School of Physic, Trin. Coll. Dubl.

Saponin.—About six years ago Professor Kobert annou
commercial "saponin" was not a homogeneous compound,
rule, consisted of at least four different bodies, two of wh
inert while the other two were very poisonous (*Pharm. Jo*
xvi., 366). Since that time the investigation has been c
in the Pharmacological Institute at Dorpat, and the sixt
the "Arbeiten," recently issued, contains two exhaustive p
Nicolai Kruskal, upon "Some Saponin Substances" and
stemma Githago, L." As these papers will probably close t
tigation for the present, Professor Kobert has taken the op
to summarise the conclusions to be drawn from the results
it has gone. In the first place he expresses the opinion
idea of a saponin as described usually in the text book
pharmacological foundation, and at most can only have a c
application. But in price lists it should be replaced by "
sapotoxin," "quillaic acid," &c., or if the name "saponi
tained, the drug from which it has been prepared and the
of preparation should be shortly indicated. In the
"saponins" the chemist apparently has to do with differe
of bodies, the composition of each series being represent
general formula. One of these formulæ, now published
first time, is $C_nH_{2n-8}O_{10}$, and represents a series of whic
three members have been recognised. The best known o
the "saponin" of Stutz, $C_{19}H_{30}O_{10}$. The lowest membe

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[*] This Report is based upon an article by the writer in the "Year-Boo
ment" for 1892.

series, which gave on analysis figures corresponding to $C_{17}H_{26}O_{10}$, shares this formula with the crystalline "syringin," which Körner identified as oxymethylconiferin hydrate. The amorphous substance of this composition prepared by Kruskal agrees with syringin in being a glucoside and giving a characteristic colour reaction with sulphuric acid, but whether other analogies between the two exist has not yet been determined. But one observation of the greatest interest is that it appears that several substances of this class exist which give the same results on analysis and behave similarly in all their chemical reactions, but which when tested pharmacologically show an enormous difference in the intensity of their toxic action. One of them, the "agrostemma sapotoxin," differs also physiologically from the other saponins in being absorbed by the subcutaneous tissue and by the larger intestines. This is considered to be of great hygienic importance in presence of the fact that in Russia the admixture of a certain proportion of corn cockle seed with corn is allowed upon the plea that when ground it improves the appearance of the flour. Professor Kobert considers that the continuance of this practice should be permitted only on condition of the previous removal as far as possible of the black husk and poisonous embryo.—(*Pharm. Journ.*, June 27, 1891.)

Cocaïn and Mercury Compounds.—A delicate reaction between cocaïn hydrochlorate and calomel has been observed by M. Schell (*Journ. Pharm. Els. Loth.*, Jan., p. 8). If a trace of cocaïn hydrochlorate be mixed by means of a dry glass rod with a very minute quantity of calomel, and the mixture be breathed upon, the moisture that condenses is sufficient to cause it to blacken immediately. No other alkaloid has been found to give the same reaction, but atropin and calomel acquire a similar coloration in boiling water or lcohol and water. It is curious to note, however, that in the case of atropin it occurs with the free alkaloid and not with a salt, whilst in that of cocaïn it occurs with a salt and not with the free lkaloid. Herr Bruner also has called attention to the incompatiility of some preparations for outward application, in which a ocaïn salt is ordered in conjunction with a mercurial compound Apot.-Zeit., Feb. 11, p. 86). An ointment of mercuric oxide and ocaïn hydrochlorate, for instance, is ordered in ophthalmic ractice, but after being kept for a time the anodyne effect of the intment gives place to a pronounced caustic action, due to the nversion of mercuric oxide into oxychloride. An ointment of caïn hydrochlorate, silver nitrate, and vaseline, sometimes ordered

as a dressing for wounds, is also liable to undergo alteration
formation of silver chloride, but it is pointed out that thi
can be retarded by thoroughly mixing the solution of silv
with the vaseline before adding the cocaïn hydrochlorate.—
Journ., 1891.)

ANTIPYRETICS.

Action of Antipyretics.—The theory as to the mode of
antipyretics is of great practical interest. The action of an
may be supposed to be due to the limitation of the oxid
cesses and consequent lowering of heat development,
increase in the heat radiation from the surface of the body
over, they may have a purely local action—*i.e.*, on the cellu
or they may influence the nerve centres regulating the dev
or radiation of heat. Messrs. Sawodowsky and Podanow
sider that they have proved that the lowering of tempera
duced by antipyrin and antifebrin is attributable exclu
their influence upon the brain-centres regulating the tem
which occur in the corpus striatum (*Apot.-Zeit.*, Feb. 1
The authors, in an experiment, cut the brain of an anima
close behind the corpus striatum and thalamus opticus,
isolate the organism from the heat centres, while the co
with the respiration and vaso-motor centres was retained.
the animal so treated lived for some time and the arte
pressure and breathing remained unaltered, the body ten
fell continuously. Even injections of the most powerful
such as putrescent matter, caused not the slightest rise of
ture, although all the other symptoms of putrescent infec
present. The skin temperature also remained entirely u
although in the case of normal animals this rises consider
the injection of antipyretics. An apparent exception w
in the case of quinine hydrobromide, but this was attribut
known action of bromine. The conclusion drawn by the
that the action of quinine salts, resorcin, and thallin, in
the temperature is dependent upon their specific influence
temperature-regulating centres situated in the anterior p
brain.—(*Pharm. Journ.*, Feb. 28, 1891.)

Dr. Gottlieb points out that by calorimetric determinati
total loss of heat of an animal, at a given temperature, w
determine the value of its heat-production. He arrives
conclusions:—

Quinine depresses in rabbits the production of heat. The diminution in normal animals amounts to from 8 to 18 per cent.; in pyrexia induced by puncture of the brain, to 40 per cent. Simultaneously it lessens the loss of heat.

Antipyrin lowers the temperature exclusively by bringing about increased loss of heat. There is no diminution in the production of heat; *per contra*, it, in small doses, at first increases the production of heat. The rise in temperature after puncture of the brain is a regulative disturbance, and the reason why antipyretic drugs have so little effect upon healthy men and animals is the perfection of their heat-regulating mechanism.

The results of experiments upon animals agree with the clinical indications drawn at the bedside. Whenever our main object is to lower high temperature quickly, and as safely as possible, we choose a member of the antipyrin group. For long-continued antipyretic treatment, on the contrary, we give the preference to quinine.—(*Archiv. f. exp. Pathol. u. Pharm.*, xxviii., p. 167.)

Phenocoll Hydrochlorate.—This body, an ally of phenacetin, is an addition to the group of antipyretic and anti-rheumatic remedies; and has been reported upon by Dr. Hertel (*Deut. med. Wochenschr.*, April 9, 1891). It is a white powder, in small crystals, with a bitter taste, and soluble in sixteen parts of water at 62° F. According to Kobert it is not poisonous to animals, and has no deleterious effects on the blood, while von Mering found that 22 grains produced no symptoms in a rabbit, and that in pneumonia and typhus 15 grains acted as a trustworthy antipyretic, reducing temperature about 2° C., and never causing collapse or cyanosis. The amount of sweating was about the same as after large doses of antipyrin. Of phenocoll, a dose of 15 grains equals in its antipyretic action 23 to 30 grains of antipyrin, and 12 to 15 grains of phenacetin. Doses of 7 to 15 grains acted well as an antineuralgic. Hertel gave it in doses of 7 to 15 grains in cases of phthisis and rheumatism. The following is a summary of his results:—In phthisis, single doses of 7 grains lower the temperature about ½° C. for a short time. Doses of 7 grains given hourly for three hours reduce the temperature about 1° C., but not with certainty; the reduction lasts only a short time. Doses of 15 grains cause reduction of temperature, 1° to 1½° C. in a few hours, the reduction generally lasting about two hours. Seventy-five grains given during twenty-four hours generally keep the temperature normal. The subsequent rise of temperature is regular, and unaccompanied by rigors or sweating. In

acute rheumatism the same dose keeps the patient free fr
but scarcely reduces the temperature, which only falls
joint affections improve. It has no effect in gonorrhœal rhe
The urine, after about 75 grains have been taken, becomes b
red or dark brown in colour, becoming deeper-coloured on
to the air. On adding solution of perchloride of iron, a da
is produced, which clears up somewhat with strong sulph
but does not disappear entirely, and by transmitted ligh
peculiar greenish colour. Phenocoll is excreted very qu
this reaction is not obtained for more than about twelve ho
the last dose. No disturbance of the heart, respiration, or
was ever observed. It should not be kept in watery solut
decomposes slowly. Hertel states that he was very fa
impressed with the general results of its use, and advise
observations.—(*Brit. Med. Journal*, Suppl., May 2, 1891.)

Phenacetin in Influenza.—Dr. Clemow (*Brit. Med.*
June 27, 1891) fully corroborates the testimony of other obs
to the excellent effects of phenacetin in epidemic influenza. H
gives 5 to 10 grains, either in cachets or suspended in mi
repeated in an hour if the pains are not fully relieved,
every four hours until further directions. He is fully conv
the superiority of this drug over antipyrin and salicin, and
with no bad symptoms from its use. The greater rapid
which the pains are relieved is very striking, and phenace
rank as one of the most valuable analgesics.

ANTISEPTICS.

Benzoate of β-naphthol.—The insolubility of the higher
compounds has till recently been a great obstacle to their
antiseptics. The naphthols, especially naphthol β, have
some time administered as intestinal antiseptics, but it
found that a compound of naphthol β with salicylic acid, in
under the name of bethol, was more efficient. This s
varied considerably in composition, and was also inadmissi
on account of renal disease salicylic acid was contra-indicat

MM. Yvon and Berlioz have prepared a benzoate of
which is soluble in alcohol or chloroform, feebly soluble in
ether. This compound, when introduced into the intestin
up into naphthol β (which remains in the intestine) and
acid, which is eliminated by the kidneys in the form of
salts and alkaline hippurates—(1) It is very slightly p

(2) it is an antiseptic as powerful as its congeners; (3) it encourages diuresis, the absorbed portion being rapidly eliminated by the urine; and (4) it can be given in large doses, but it is advised to give small and frequently-repeated doses rather than single large quantities. More than a drachm daily has been administered to an adult. (*Brit. Med. Journal*, Suppl., Nov. 7, 1891.)

Dr. F. W. Burton, in a paper on Putrefactive Decomposition in the Intestinal Tract (*Brit. Med. Journal*, April 4, 1891), cites several cases of typhoid fever and of tuberculous ulceration of the bowel, in which β naphthol was given with marked benefit—2 to 8 grains every few hours. It checked the diarrhœa and lessened the offensive odour of the stools.

Iodphenin is formed by treating with iodine phenacetin, to which some hydrochloric acid has been added. It can be obtained in steel-blue crystals, and is almost insoluble in water, but soluble in alcohol. Herr Scholvien brought iodphenin before the Berlin Pharmaceutical Society as a compound possessing extraordinary germicide properties. It is claimed that five minutes' contact with a 1 in 5,000 solution of iodphenin renders *Staphylococcus aureus* incapable of further developing.—(*Pharm. Journal*, May 30, 1891, from *Apot. Zeit.*)

Sulphite of Zinc.—Twenty years ago, in a paper read before the British Pharmaceutical Conference at Liverpool, Professor Tichborne called attention to the possible value of zinc sulphite as an antiseptic (*Pharm. Journal*, [3] i., 351). Recently he has again suggested it as a material for the preparation of antiseptic dressings, and Dr. Heuston (Adelaide Hospital, Dublin) reports that for this purpose he has found it superior to sal alembroth, it being non-poisonous, non-irritative, and highly antiseptic (*Brit. Med. Journal*, Nov. 8, p. 1064). Professor Tichborne states that zinc sulphite is best prepared by mixing in solution six parts of zinc sulphate and five and a quarter parts of sodium sulphite. The reaction takes place slowly, but goes on to completion, the new salt, which forms as a white crystalline precipitate, being very insoluble in water, though soluble in excess of sulphurous acid. Dried at 100° C., it has the composition represented by the formula $ZnSO_3 \cdot 2H_2O$, but if only dried at the ordinary temperature it contains another molecule of water. In contact with water it undergoes a slow but regular oxidation, which in an experiment with a saturated solution was complete on the eighteenth day. Zinc sulphite can be used for the saturation of any fabric, such as gauze or lint, without the ntervention of an adhesive material. The fabric is first boi water, to cleanse and sterilise it, after which a boiling sol zinc sulphate and sodium sulphite in equivalent propor poured upon it, and when thoroughly mixed and satura whole is allowed to stand for twelve hours. The zinc su said to be deposited in and about the fibres of the fabric i scopic crystals, soft and even unctuous to the touch. The then passed under rollers submerged in water to remove sodium sulphate. It is suggested that this kind of dressin be dyed with an organic pigment to distinguish it from oth for the purpose of indicating the progress of the discharge action of liberated sulphurous acid on the colour.—(*Pharm.* Nov. 20, 1890.)

Creolin.—A number of instances are on record in contr of the asserted non-poisonous qualities of creolin. Some in evidence as to the action of creolin on the human subject gathered from a thesis on that compound published at during the course of this year. Dr. Bitter, the author, n creolin has already been used in more than 2,000 midwifery Breslau. As appears to be the case with nearly every n pound of the kind, the results, according to Drs. Born an are most encouraging. In four of the midwifery cases, symptoms of poisoning occurred during the administrati course of creolin injections. Three of the patients were seized with feelings of restlessness, anxiety, nausea, darkne the eyes, and a tendency to syncope. The most peculiar f these cases was a strong flavour of tea or smoke in the m which all the patients complained. This symptom lasted f time, whilst the nausea, &c., disappeared immediately upon continuance of the vaginal injections of creolin. The fo was more severe; the patient suffered from great restless prostration for several days after the injections were About thirty-six hours after the beginning of the attack th drawn off with the catheter, was very dark and strongly alb Within a few days these symptoms of acute nephritis disa Dr. Bitter advocates creolin as superior to other disinfec account of its "relatively" (*sic*) non-poisonous qualities, it ence as a deodoriser, and its blandness when applied mucous membranes, and wounds. It neither dries the mucosa nor causes any contraction of the canal. Creolin special hæmostatic action. Dr. Bitter finds that there advantages in creolin, as the emulsions employed for injections are opaque, and the preparation of creolin usually on sale appears to be unstable.—(*Brit. Med. Journal*, Dec. 13, 1890.)

Hydro-naphthol has been before the profession for some time, but its powers as a germicide are differently estimated by different observers.

Dr. T. H. Bryce (*Brit. Med. Journal*, Nov. 22, 1890) has investigated its action in the Bacteriological Laboratory, Glasgow. His experiments were all made upon one organism, Staphylococcus pyogenes aureus, and with a solution of hydro-naphthol in rectified spirit and glycerine. The pure drug is insoluble in water, and this is undoubtedly a disadvantage. He concludes that, when dissolved as above, it is a powerful antiseptic agent, in a strength of 1 in 400.

The standard solution 1 in 100 is thus made:—

Hydro-naphthol	1 part	1 part
Rectified spirit	10 parts	
Glycerine ... ...,		9 parts

Aristol, a proposed substitute for iodoform, does not appear to have attracted much attention. The contradictory experiences that have been reported may, perhaps, be partly explicable by variation in its quality. Herr Reuter finds that some specimens of aristol (= dithymol diniodide) contain alkaline iodide and free iodine. But the question arises whether an absolutely pure preparation is advantageous, for it would seem that pure aristol is so stable that it would be less likely to act as a bactericide than a preparation rendered unstable by the presence of more or less free iodine or alkaline iodide.—(*Pharm. Journal*, from *Apot. Zeit.*, Jan. 28, 1891; cf. Pollak, *Therap. Monatsch.*, December, 1890.)

Apomorphin and Apocodein.—Dr. Murrell (*Brit. Med. Journal*, Feb. 28, 1891) has made some interesting observations upon the value of these drugs as expectorants in the treatment of chronic bronchitis. Apomorphin can be given by the mouth in comparatively large doses (1½ to 2 grains three times a day), without exciting vomiting or inconvenience. It may be applied successfully in the form of ointment (⅓ gr. to ʒi.), and is invaluable in the bronchitis of children.

A *neutral* solution of apocodein can be injected hypodermically (⅓ grain) without causing local irritation. It rarely produces nausea or vomiting, and is an effective expectorant. From 3 to 4 grains may be administered daily with perfect safety.

Diuretin has attracted some attention. It is now understood to be merely a mixture of theobromine-sod sodium salicylate. It is very unstable, and is decompos acids, even by the CO_2 of the atmosphere.—(*Lambert.*)

Dr. Geisler speaks well of the drug, and states that it blood pressure (*Berlin klin. Wochensch.*, April, 1891), w Drozdovsky, of St. Petersburg, sums up by saying that (*a*) has no influence on the heart, (*b*) it is very unreli diuretic agent, and (*c*) cannot advantageously be used as tute for digitalis, adonis, strophanthus, and other allied re (*Brit. Med. Journal*, Oct. 10, 1891.)

The dose of diuretin required is large—viz., 5 to 7 a day. The drug is expensive, and, upon the whole, its recognition does not appear to be a strong one.

Sulphonal.—Dr. Stewart, of Philadelphia, states that be readily induced by sulphonal, *within a few minutes*, by t expedient of dissolving the dose of sulphonal in about 6 *boiling* water, the patient taking the liquid as hot as can be (*Braithwaite's Retrospect*, from *Philad. Med. News*, Jan. 1

Cantharidin in Phthisis.—In view of the conflicting st that have been made as to the preparation and dose of used by Dr. Liebreich in the treatment of tuberculosis u name "cantharidinate of potash," it may be convenient t record what is understood to be the exact formula, which kindly communicated by Dr. Schacht, of Berlin. In prep liquid 0·2 gram of cantheridin and 0·4 gram of potassium (or 0·3 gram of sodium hydrate) are weighed with great c and heated in a flask of one litre capacity on a water-b about 20 c.c. of water, until a clear solution results. then added quite gradually, while the heat is continued, mark is nearly reached, and then after cooling the whole up exactly to one litre with water. A litre of the liquid, t contains 2 decigrams of cantharidin, and each cubic c contains one-tenth of a milligram.—(*Pharm. Journal*, M 1891.)

This drug is not, as in the case of "tuberculin," ope imputation of being a secret remedy. It, however, is induce toxic symptoms, and the reports in the literatur past year, when put together, give little encouragemen employment in the treatment of tuberculosis. (Cf. B *Journal*, May 9, 23, 30, 1891.)

PART IV.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—George H. Kidd, M.D., F.R.C.S.I.
General Secretary—W. Thomson, F.R.C.S.I.

SECTION OF OBSTETRICS.

President—Andrew J. Horne, F.R.C.P.I.
Sectional Secretary—F. W. Kidd, M.D.

Friday, January 8, 1892.

Dr. Smyly in the Chair.

Anæsthetics: a Clinical Study.

Dr. Dudley Buxton, of London, gave an Address on the above subject. He pointed out that although anæsthetics had been applied to surgery for nearly half a century yet with the exception of a few monographs such as those of Snow, Bernard, and some few others, but imperfect attempts had been made to treat the subject from the clinical standpoint. Passing the literature of the subject under review he pointed out that the various Commissions and investigations which had been carried out in the past had conflicted in their findings, so that although some had claimed to have settled the various *questiones vexatæ*, yet really no definite conclusions could rationally be accepted, because while the experiments undertaken by different observers do not give uniform results, the observers themselves were so well known as careful and skilled experimenters that it was impossible to accept the evidence of one side rather than that of another. This being so, he urged that the time had come for the profession itself to take up the matter, and to collect from their hospital and private practice a reliable record of the action of anæsthetics upon human beings. The present occasion afforded a favourable opportunity for this, as a committee had been formed by the British Medical Association for the very purpose of initiating an exhaustive inquiry into the action of

anæsthetics. He then pointed out the various sources of in
from which evidence might be collected, viz., from *post morte*
upon cases of deaths under anæsthetics; from the symptoms c
which more or less difficulty had arisen during the course of ad
tion of an anæsthetic; and lastly, from cases in which the phen
the normal induction of anæsthesia presented themselves. He
scribed the *post mortem* appearances which had been described, an
in what way their evidence could be relied upon and how far i
accepted with caution. He further entered in detail upon the
which could be obtained from cases when unusual phenomena
themselves, and showed the lines along which the investigatio
travel. He indicated, for example, how a mere insufficiency o
tion might arise from very various causes, and so that the in
this particular complication would have to enter most carefull
very various causes of it, and added that the practical bearin
matter were well shown by this example, as upon the correct ex
of the symptoms seen must rest the choice of the method of
employed and upon that hung the chance of the patient's life be
He then considered *seriatim* the points which were involved in the
under which the inquiry was seeking information, viz.—age,
time of day when the anæsthetic was taken, the manner in wh
given, the source and purity of the drug, and the after effects
These could all be grouped under three headings—namely,
affected by the individual patient; (2) those affected by the
operation; and (3) those affected by the chemical nature and r
the anæsthetic, *e.g.*, its purity, the changes it had undergone by
of the air or sunlight, or that of illuminating gas. A thorough
tion of these sources of information could not fail to result
increase in our knowledge of the action, dangers, and compli
anæsthetics, and would, he thought, teach the whole profession
was valuable and much that could not but prove of great use to
at large. Under these three headings were then passed in revie
speaker, all the phenomena as met with during the use of ethe
form, nitrous oxide, and their bearing upon the various qu
issue.

The **President** of the Royal College of Surgeons said he
by Dr. Childs, of Weymouth, to form a committee in Irelan
nection with the Anæsthetic Committee, and he hoped to do
as possible. The President hoped the President of the Royal
Physicians, and Fellows and Members of his College, would c
Also the Dublin Branch of the British Medical Association, and
Academy of Medicine, the Infirmaries, and Workhouses, and Dis
In fact, the anæsthetic question is one of vital importance
member of the profession, no matter where located, and als

individual who takes an anæsthetic. He also drew attention to the greater risk attendant on the administration of anæsthetics in cases of minor operations—and reductions of dislocations than in major operations. He was thankful to say he never was present at a death from an anæsthetic, but saw several "touch-and-go cases." He confessed he was always more afraid of the anæsthetic than the operation.

Mr. Ormsby stated he hoped something definite might come from this commission, but he greatly feared if the commission was not put in the hands of an experienced committee, with two local hon. secretaries, who had specially investigated the subject of anæsthetics, and who would really take trouble about the matter, very little good would be done. As an operating surgeon he always feared the anæsthetic far more than the operation, and he considered that if the investigation was carried out in a thorough manner, it would prove a valuable record. As the paper did not allow any discussion on the relative safety of one anæsthetic over another, he would conclude his remarks by congratulating Dr. Dudley Buxton on his very able and practical paper.

Mr. Thomson was of opinion that much good would result from the work of the committee which it was proposed to appoint. He agreed in the importance of instruction in the methods of administering anæsthetics, all of which had dangers; and he was afraid that everywhere the profession had failed in its duty in this respect. The paper did not permit any discussion on the merits of various anæsthetics, but as to the causes which were supposed to lead to death. He thought there was to be added the influence of fright which was produced by the publication in the ordinary newspapers of reports of deaths from anæsthetics.

Dr. Harley.—I fear there has been a panic about anæsthetics displayed here to-night quite uncalled for, and I was sorry to hear the President of the College of Surgeons state that he approached an operation with more fear of the anæsthetic than of the operation. I have given anæsthetics frequently for the late Mr. Butcher, Mr. Wheeler, and other surgeons, also for obstetric surgeons, and have had patients anæsthetised for from an hour and a half to two hours, and for Emmet's operation, Hagar's dilatation, and such others, besides many capital operations, and I am happy to say the operating surgeon never had any anxiety about the patient. I have never seen a death from anæsthetics, nor have I ever been frightened about a patient. I have never even had a case of what Mr. Croly calls "touch-and-go." I have been twenty years practising, and have never heard of more than two or three deaths in all that time from an anæsthetic. In private practice I certainly always devote my whole attention to my own duty, and never think of the operation.

Mr. Foy.—Dr. Buxton's paper gives very little scope for the discussion of the method of administration of anæsthetics. As regards the relative

values of chloroform and ether as anæsthetics, we are preclude
discussing it. The author has stated that deaths from chlorofor
still increasing, but he does not mention that the percentage o
is less. Outside London, with the exception of New England S
America, chloroform is the favourite anæsthetic. The risk
to as due to emphysema, might be avoided by inhalation of
The advocacy of certification cannot be approved of; there
many certificates. What is required is sound clinical and theoretica
ing on the subject, and a searching examination of candidates
risks. Climate and race cannot have any effect other than the slig
chloroform. It is used by Semites in India and Aryans in Scotla
equal success.

SIR WILLIAM STOKES fully endorsed the opinions expressed
preceding speakers as regards the importance of the communic
Dr. Dudley Buxton, and thought that it was of the utmost imp
that the administration of anæsthetics should not be entru
inexperienced persons, and also to the necessity of employin
anæsthetics. He, however, expressed some disappointment
sufficiently definite line of investigation was not indicated by Dr. Bu
the proposed inquiry, and feared that if the results of the labours
Committee about to be formed were to be nothing but a record o
to which anæsthetics had been administered, the statistics wo
be attended with better results than those of the collective invest
of disease which were eminently unsatisfactory.

DR. MYLES was of opinion that the method proposed was si
collective investigation committee; that the results, as in simila
before, would be merely a certain amount of temporary notoriety
leaders of the movement. Dr. Myles further pointed out that ver
reliance could be placed on the observations of untrained men, ar
the experimental method was the only one from which reliable ded
could be drawn.

MR. F. A. NIXON.—I must take exception to the statements
have been made to-night:—1st. That the Profession in Dublin are
way careless in the administration of anæsthetics. This is a grave
tion upon them, and I may say for myself, that the duty of givi
anæsthetic is always to me a subject of great anxiety, and one
occupies my *entire* attention. 2nd. That those who administer anæs
are ignorant, inexperienced, and do so without any instruction on th
ject. This is, indeed, a grave reflection on the clinical teaching
Dublin School. I wish, again, to say for myself, that it has alway
my practice to carefully instruct students in the administration
anæsthetic before and during its administration; to draw their att
especially to the condition of the respiration, the pupil, the pul
appearance of the face, &c., and this I consider to be one of th

important duties of every clinical teacher, which I regret to hear to-night has been so much neglected.

Dr. Dudley Buxton then replied.

SECTION OF ANATOMY AND PHYSIOLOGY.

President—Humphrey J. Broomfield, F.R.C.S.I.
Sectional Secretary—A. Birmingham, M.B.

Friday, January 15, 1892.

Dr. Brooks in the Chair.

Exhibits.

I. **Professor Fraser** exhibited a beautiful collection of photographic enlargements of serial sections of embryoes, and of brains. He explained how they were made, and pointed out the great advantages of using this method of reproducing such sections, as contrasted with old methods of copying with the camera lucida.

The **Chairman** complimented Professor Fraser on his work, and suggested the advisability of supplying with such reproductions, line-tracings, which would bring the important point of the sections more clearly before the untrained eye.

Prof. Fraser, in reply, agreed with the Chairman, and explained how such tracings might be simply and quickly produced with the aid of photography.

II. **Professor Birmingham** exhibited a specimen in which the transverse ligament of the atlas was ossified, except at the extremities, which still remained fibrous at the attachments to the bone. The odontoid process might be rotated freely within its ring.

The **Chairman** asked some questions about the specimen, to which Prof. Birmingham replied.

Papers.

I. **Dr. Robert H. Woods** read a paper on a few applications of a physical theorem to membranes in the human body in a state of tension.

The theorem was that if P be the pressure of fluid contained in a membrane curved circularly in two directions at right angles to one another, and if r and r be the two radii of curvatures and T the tension at a given point,

$$\text{Then}\text{——}P \propto T\left(\frac{1}{r_1} + \frac{1}{r}\right)$$

This theorem, when applied to the heart, shows that the tension in the walls is not the same for different points on the heart wall, nor can it be

constant for the same point in different stages of contraction, on a
of the variation in the radii of curvature, but will be greater acc
as the curvature is more gradual and the heart more dilated. The
then, will have to make a greater effort at the beginning than t
the end of systole. But the heart wall is thinnest when most d
hence we have the two factors contributing towards the difficulty c
mencing systole. The paper went on to show that this difficult
part at least, got over by the columnæ carneæ and musculi pa
which cross the cavity of the heart, and thus act more directly
wall, as well as economising space.

An example was taken from the pathological condition kn
prostatic bladder. The ridging on the interior of the bladder
attempt to form columnæ carneæ of its own for the purpose of
the pressure of the urine with the view of overcoming the resist
its outflow.

The same theorem, when applied to the uterus, explains the
why an abnormally great collection of liquor amnii renders the
almost powerless in expelling the fœtus, and also explains why l
quantity of liq. amnii escape facilitates its expulsion.

The author exhibited some specimens of hearts hardened under
rate interventricular pressure, and proved that if the thickness
wall at different points be substituted for the tension (to which
be taken as proportional), the formula

$$T\left(\frac{1}{r_1}+\frac{1}{r}\right)$$

is constant, or that the thickness of the heart at any point bore a
relation to the curvature at that point.

The want of a tendency to heal in varicose veins was also ex
in a similar way, for the more dilated the vein the higher the ten
its walls and the less availed any effort it could make at contrac
its normal size.

The author also deduced that in an adult heart the pressure in
ventricle is about six and a half times that of the right. There is
to believe that the pressure in the left ventricle is a little over n
of water; that in the right would, on this assumption, be equal to
of 17 inches of water.

The **Chairman** congratulated Dr. Woods on his able paper.
glad to hear his conclusions as to the use of the musculi papilla
columnæ carneæ, with which he agreed.

Professor Fraser doubted the applicability of such precise
matical rules to structure in animal bodies. He would like to
Dr. Woods' conclusions might be applied to all hearts.

Professor Birmingham complimented Dr. Woods upon the pro
of such an interesting paper. Applying these conclusions to the

man, he would like to hear from Dr. Woods how he accounted for the distribution of the columnæ carneæ on the interventricular septum. In the left ventricle, above, where the curvature is most open, the columnæ carneæ are almost absent, while they are numerous below, where the curve is reduced. On the right side of the septum, which is convex, the columns are much better developed. Professor Birmingham also referred to an old theory of the use of the columnæ carneæ—namely, that by whipping the blood, they caused it to give off its gas more readily, as when flat soda-water is whipped up, it gives a renewed discharge of gas. He much preferred Dr. Woods' scientific explanation.

In reply, **Dr. Woods** was of opinion that his theorem and conclusion might be applied to all hearts. He thought the soda-water explanation of the function of the columnæ carneæ could not be entertained, as the gases were not given off in the ventricle, and further, were not in true solution in the blood; and that the reason why stirring flat soda-water evolved more gas, was that it was shown the example by the gas adhering to the rod.

Irregular Nerve Supply to the Dorsum of the Foot.

Dr. P. J. Fagan read a note of an irregular nerve supply to the dorsum of the foot. The external saphenous supplied the outer three and a half toes. The internal saphenous ran along the inner side of the great toe to its tip. The musculo cutaneous sent one branch to the inner side of the great toe, and another to anastomose with the external saphenous. The anterior tibial divided into two branches; one supplied the contiguous sides of the great and second toe, and the other ran to the dorsum of the third. Such a condition was not reported amongst the 229 feet examined during the collective investigation of the Anatomical Society last year.

The **Chairman** discussed the communication at some length. He referred to the abnormal arrangement of the anterior tibial, and he compared it to the condition which he had found in certain lizards. He had never seen an internal saphenous with such an extensive distribution.

The Section then adjourned.

COCAIN.

M. **Magitot** (*Journal de Pharmacie et de Chimie*) writes:—Cocain should not be employed as an anæsthetic in cases of cardiac, respiratory, or nerve troubles. Cocain should be deeply injected instead of subcutaneously, care being taken to avoid intra-venous injection. Cocain should be administered to the patient when he is lying down. Cocain should be administered *fractionally* to allow of toxic symptoms being watched.—*Répertoire de Pharmacie*, No. 8, 1891.

SANITARY AND METEOROLOGICAL N

Compiled by J. W. Moore, B.A., M.D., Univ. Dubl.; F.R.C.
F. R. Met. Soc.; Diplomate in State Medicine and ex-Sch. Trin. Co

Vital Statistics

For four Weeks ending Saturday, January 2, 1892.

The deaths registered in each of the four weeks in the
principal Town Districts of Ireland, alphabetically arranged,
ponded to the following annual rates per 1,000:—

Towns	Weeks ending				Towns	Weeks endin		
	Dec. 12.	Dec. 19.	Dec. 26.	Jan. 2.		Dec. 12.	Dec. 19.	Dec. 26.
Armagh -	31·5	12·6	44·1	51·6	Limerick -	29·4	21·0	15·4
Belfast -	42·2	43·8	35·5	37·7	Lisburn -	17·2	21·5	38·7
Cork -	56·0	57·4	47·6	60·2	Londonderry	24·0	20·8	8·0
Drogheda	39·6	17·6	8·8	44·0	Lurgan -	27·6	46·0	32·2
Dublin -	24·5	32·6	28·2	43·8	Newry -	11·7	27·3	11·7
Dundalk -	23·4	27·3	7·8	11·7	Sligo -	10·4	5·2	10·4
Galway -	30·4	6·7	3·8	49·4	Waterford -	19·2	24·0	21·6
Kilkenny	51·7	32·9	0·0	37·6	Wexford -	22·5	45·0	40·5

In the week ending Saturday, December 12, 1891, the mort
twenty-eight large English towns, including London (in which
was 18·1), was equal to an average annual death-rate of 19·8 p
persons living. The average rate for eight principal towns of
was 30·6 per 1,000. In Glasgow the rate was 26·2, and in Ed
it was 45·3.

The average annual death-rate represented by the deaths re
during the week in the sixteen principal town districts of Ireland
per 1,000 of the population (unrevised) according to the recent C

The deaths from the principal zymotic diseases in the sixteen
were equal to an annual rate of 2·3 per 1,000, the rates varyi
0·0 in ten of the districts to 4·7 in Kilkenny—the 11 deaths from a
registered in that district comprising 1 from whooping-cough. A
207 deaths from all causes registered in Belfast are 3 from m
from typhus, 6 from whooping-cough, 4 from enteric fever,

diarrhœa, 20 from phthisis, and 81 from diseases of the respiratory system. The 80 deaths in Cork comprise 2 from whooping-cough, 1 from enteric fever, 4 from phthisis, and 43 from diseases of the respiratory system. The Assistant-Registrar of No. 4 District, Belfast, specially reports 8 deaths from influenza, and the Registrar of No. 5 District reports 2 deaths from the same disease.

In the Dublin Registration District the registered births amounted to 154—96 boys and 58 girls; and the registered deaths to 168—88 males and 80 females.

The deaths, which are 39 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 25·2 in every 1,000 of the estimated population. Omitting the deaths (numbering 5) of persons admitted into public institutions from localities outside the district, the rate was 24·5 per 1,000. During the forty-nine weeks of the year, ending with Saturday, December 12, the death-rate averaged 25·6, and was 1·6 under the mean rate in the corresponding period of the ten years 1881–1890.

Twenty-five deaths from zymotic diseases were registered, being 1 in excess of the average for the corresponding week of the last ten years and 3 over the number for the week ended December 5. They comprise 8 from influenza (including 2 cases in which the disease was complicated with bronchitis), 3 from whooping-cough, 11 from enteric fever, 3 from diarrhœa, 2 from dysentery, and 1 from erysipelas.

The number of cases of enteric fever admitted to hospital is 23, being 6 under the admissions for the preceding week, but 3 over the number for the week ended November 28. Thirty-five enteric fever patients were discharged, 4 died, and 133 remained under treatment on Saturday, being 16 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include also 2 cases of measles, but no cases of scarlatina or typhus were received. Eight cases of measles, 5 of scarlatina, and 2 of typhus, remained under treatment in hospital on Saturday.

The number of deaths from diseases of the respiratory system registered is 50, being equal to the average for the corresponding week of the last ten years, but 29 under the number for the week ended December 5. The 50 deaths consist of 31 from bronchitis and 19 from pneumonia or inflammation of the lungs.

In the week ending Saturday, December 19, the mortality in twenty-eight large English towns, including London (in which the rate was 17·8), was equal to an average annual death-rate of 19·1 per 1,000 persons living. The average rate for eight principal towns of Scotland was 26·0 per 1,000. In Glasgow the rate was 24·6, and in Edinburgh it was 26·8.

The average annual death-rate in the sixteen principal town
of Ireland was 35·7 per 1,000 of the population (unrevised) acc
the recent Census.

The deaths from the principal zymotic diseases in the sixteen
were equal to an annual rate of 2·2 per 1,000, the rates vary
0·0 in ten of the districts to 9·2 in Lurgan—the ten deaths
causes registered in that district comprising 2 from whoopin
Among the 215 deaths from all causes registered in Belfast ar
measles, 1 from typhus, 6 from whooping-cough, 1 from diph
from enteric fever, 3 from diarrhœa, 16 from phthisis, and
diseases of the respiratory system. The 82 deaths in Cork co
from whooping-cough, 1 from enteric fever, 12 from phthisis,
from diseases of the respiratory system. The Assistant-Reg
Belfast No. 4 District specially reports 4, and the Registrar
District 3 deaths from influenza and its complications.

In the Dublin Registration District the registered births amo
234—114 boys and 120 girls; and the registered deaths to 2
males and 114 females.

The deaths, which are 13 over the average number for the cor
ing week of the last ten years, represent an annual rate of mor
33·9 in every 1,000 of the population. Omitting the deaths (nu
9) of persons admitted into public institutions from localities
the district, the rate was 32·6 per 1,000. During the fifty week
year, ending with Saturday, December 19, the death-rate averag
and was 1·6 under the mean rate in the corresponding period
ten years 1881–1890.

Twenty-nine deaths from zymotic diseases were registered,
over the average for the corresponding week of the last ten y
also 4 over the number for the week ended December 12. Th
prise 8 from influenza and its complications, 4 from whooping-
from enteric fever, 5 from diarrhœa, and 1 from dysentery.

Twenty-four cases of enteric fever were admitted to hospital,
over the admissions for the preceding week, but 5 under the nu
the week ended December 5. Forty enteric fever patients
charged, 3 died, and 114 remained under treatment on Saturd
19 under the number in hospital at the close of the preceding w

The hospital admissions for the week include, also, 3 cases of
4 of scarlatina, and 1 case of typhus. Five cases of measles, 8
latina, and 1 case of typhus remained under treatment in hos
Saturday.

Seventy-two deaths from diseases of the respiratory syste
registered, being 17 in excess of the average for the correspondi
of the last ten years, and 22 over the number for the we
December 12, which, however, was 29 under that for the wee

December 5. The 72 deaths comprise 51 from bronchitis, and 18 from pneumonia or inflammation of the lungs.

In the week ending Saturday, December 26, the mortality in twenty-eight large English towns, including London (in which the rate was 21·8), was equal to an average annual death-rate of 22·8 per 1,000 persons living. The average rate for eight principal towns of Scotland was 27·1 per 1,000. In Glasgow the rate was 27·0, and in Edinburgh it was 25·4.

The average annual death-rate represented by the deaths registered in the sixteen principal town districts of Ireland was 29·2 per 1,000 of the unrevised population, based on the Census of 1891.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1·9 per 1,000, the rates varying from 0·0 in twelve of the districts to 3·9 in Newry—the 3 deaths from all causes registered in that district comprising 1 from whooping-cough. Among the 174 deaths from all causes registered in Belfast are 1 from typhus, 8 from whooping-cough, 1 from diphtheria, 4 from diarrhœa, 24 from phthisis, and 84 from diseases of the respiratory system. The 68 deaths in Cork comprise 1 from whooping-cough, 2 from diphtheria, 10 from phthisis, and 32 from diseases of the respiratory system. The Assistant-Registrar of Belfast No. 4 District specially reports 2 deaths from influenza.

In the Dublin Registration District the registered births amounted to 134—81 boys and 53 girls; and the registered deaths to 194—99 males and 95 females.

The deaths, which are 19 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 29·1 in every 1,000 of the population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 28·2 per 1,000. During the fifty-one weeks of the year, ending with Saturday, December 26, the death-rate averaged 25·8, and was 1·6 under the mean rate in the corresponding period of the ten years 1881–1890.

The number of deaths from zymotic diseases registered is 25, being 2 over the average for the corresponding week of the last ten years, but 4 under the number for the week ended December 19. The 25 deaths comprise 1 from typhus, 5 from influenza and its complications, 5 from whooping-cough, 8 from enteric fever, 1 from diarrhœa, 1 from dysentery, and 1 from erysipelas.

The number of cases of enteric fever admitted to hospital is 20, being a decline of 4 as compared with the admissions for the preceding week. Twelve enteric fever patients were discharged, 3 died, and 119 remained under treatment on Saturday, being 5 over the number in hospital at the close of the preceding week.

The hospital admissions for the week include, also, 1 case of
cases of scarlatina, and 4 of typhus, against 3 cases of me
scarlatina, and 1 of typhus admitted during the preceding w
cases of measles, 11 of scarlatina, and 4 of typhus remained u
ment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had
55 for the week ended December 12, to 72 for the following
this week to 52, but this number is one over the average fo
week of the last ten years. The 52 deaths comprise 40 from
and 9 from pneumonia or inflammation of the lungs.

In the week ending Saturday, January 2, 1892, the mortality
eight large English towns, including London (in which the rate
was equal to an average annual death-rate of 37·4 per 1,0
living. The average rate for eight principal towns of Scotlan
per 1,000. In Glasgow the rate was 29·3, and in Edinbu
22·8.

The average annual death-rate in the sixteen principal tow
of Ireland was 40·9 per 1,000 of the population (unrevised) ac
the recent Census.

The deaths from the principal zymotic diseases in the sixtee
were equal to an annual rate of 3·1 per 1,000, the rates va
0·0 in seven of the districts to 9·4 in Kilkenny—the 8 death
causes registered in that district comprising 1 from typhus a
whooping-cough. Among the 185 deaths from all causes re
Belfast are 1 from measles, 2 from scarlatina, 1 from typh
whooping-cough, 3 from diphtheria, 2 from enteric fever, 2
rhœa, 23 from phthisis, and 72 from diseases of the respirato
Among the 86 deaths in Cork are 1 from whooping-cough, 1 fr
fever, 3 from diarrhœa, 14 from phthisis, and 25 from disea
respiratory system. The 17 deaths in Lisburn comprise 1 fr
fever and 1 from diarrhœa. The Registrar of Belfast No.
specially reports 1 death from influenza. In Dundalk 1 death
burn 2 deaths were recorded from influenza. The Assistant
of Dundalk remarks that " influenza is very prevalent in the d

In the Dublin Registration District the registered births ar
193—104 boys and 89 girls; and the registered deaths to
males and 163 females.

The deaths, which are 94 over the average number for the c
ing week of the ten years 1881–1890, represent an annu
mortality of 45·8 in every 1,000 of the population. Omitting
(numbering 13) of persons admitted into public institut
localities outside the district, the rate was 43·8 per 1,000. I
fifty-two weeks ending with Saturday, January 2, 1892, the

averaged 26·2, and was 1·3 under the mean rate for the ten years 1881–1890.

Thirty-eight deaths from zymotic diseases were registered, being 13 in excess of the average for the corresponding week of the ten years 1881–1890, and also 13 over the number for the week ended December 26, 1891. The 38 deaths comprise 10 from influenza and its complications, 8 from whooping-cough (6 of which occurred in No. 2 North City—Lisburn-street—District), 1 from diphtheria, 10 from enteric fever, and 2 from diarrhœa.

The number of cases of enteric fever admitted to hospital is 17, being 3 under the number of admissions for the preceding week, and 7 under that for the week ended December 19. Twenty enteric fever patients were discharged, 1 died, and 115 remained under treatment on Saturday, being 4 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include, also, 2 cases of scarlatina and 1 case of typhus, but no cases of measles were received. During the preceding week 1 case of measles, 3 of scarlatina, and 4 of typhus had been admitted. Three cases of measles, 9 of scarlatina, and 5 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system amount to 87, being 32 over the average for the corresponding week of the ten years 1881–1890, and 35 over the number for the week ended December 26. They comprise 57 from bronchitis, 28 from pneumonia or inflammation of the lungs, and 3 from croup.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ *N. Long.* 6° 15′ *W., for the Month of December,* 1891.

Mean Height of Barometer, - - -	29·818 inches.
Maximal Height of Barometer (on 21st, at 9 a.m.),	30·610 „
Minimal Height of Barometer (on 10th, at 4 p.m.)	28·814 „
Mean Dry-bulb Temperature, - - -	42·3°.
Mean Wet-bulb Temperature, - - -	40·5°.
Mean Dew-point Temperature, - - -	38·3°.
Mean Elastic Force (Tension) of Aqueous Vapour, -	·235 inch.
Mean Humidity, - - - - -	86·1 per cent.
Highest Temperature in Shade (on 3rd) - -	58·0°.
Lowest Temperature in Shade (on 22nd), - -	25·2°.
Lowest Temperature on Grass (Radiation) (on 22nd),	19·2°.
Mean Amount of Cloud, - - - -	55·2 per cent.
Rainfall (on 21 days), - - - -	3·299 inches.
Greatest Daily Rainfall (on 6th), - - -	·747 inch.
General Directions of Wind, - - -	W., S.W., S.

Remarks.

The leading features of the weather were—a prepon
westerly winds, frequent gales, heavy rains, and unstea
temperature. From the 16th to the 25th, however, a
over England, France, and Germany, and within its c
cold and dense fogs with calms prevailed. Even at th
wind and mild temperature continued on the Atlantic
Scotland, and Norway.

In Dublin the arithmetical mean temperature (43·0
above the average (41·3°); the mean dry bulb readings at
were 42·3°. In the twenty-six years ending with 18
coldest in 1878 (M. T. = 32·8°), and in 1874 (M.
warmest in 1865 (M. T. = 46·2°). In 1886 the M.
37·9°; in the year 1879 (the "cold year") it was also 37
M. T. was 39·9°; in 1888 it was 43·6°; in 1889 it w
1890 it was 39·2°.

The mean height of the barometer was 29·818 inc
below the corrected average value for December—name
The mercury rose to 30·610 inches at 9 a.m. of the
28·814 inches at 4 p.m. of the 10th. The observed range
pressure was, therefore, 1·796 inches—that is, a littl
inch and three-quarters.

The mean temperature deduced from daily reading
thermometer at 9 a.m. and 9 p.m. was 42·3°, or only 0·5
for November, and 5·9° below that for October, 1891.
Mean Temp. = *Min.* + (*max—min.* × ·52), the value
above the average mean temperature for December, calcu
way, in the twenty-five years' 1865–89, inclusive (41
metical mean of the maximal and minimal readings was
with a twenty-five years' average of 41·3°. On the 3rd
in the screen rose to 58·0°—wind, S.W.; on the 22nd
fell to 25·2°—wind, S. The minimum on the grass w
the 22nd. There were 6 days of frost in the screen and
on the grass.

The rainfall was 3·299 inches, distributed over 21 day
rainfall for December in the twenty-five years, 1865–8
2·404 inches, and the average number of rainy days was
fall, therefore, and the rainy days were decidedly above
1876 the rainfall in December was very large—7·566 in
In 1872, 4·932 inches fell on as many as 24 days; an
was otherwise a fine and dry year) 4·749 inches fell on
days. On the other hand, in 1867, only ·771 of an inc
on 13 days; and in 1871 the December rainfall was only
on 13 da[illegible] In 1885, only ·742 of an inch of rai

on but 10 days, but in 1886 the rainfall was 3·348 inches, distributed over as many as 21 days. In 1887 ("the dry year"), the rainfall was 1·223 inches on 19 days; in 1888, it was 2·911 inches on 17 days; in 1889, 1·554 inches fell on 15 days; and in 1890, it was 1·856 inches on 11 days.

A lunar halo appeared on the 11th, and a lunar rainbow on the 15th. Solar halos were observed on the 8th, 9th, 13th, and 14th. High winds were noted on 14 days, and attained the force of a gale on as many as 8 occasions—the 3rd, 5th, 7th, 9th, 10th, 12th, 15th, and 28th. The atmosphere was more or less foggy in Dublin on the 7th, 13th, 16th, 20th, 21st, 22nd, 23rd, 24th, and 30th. Snow or sleet fell on the 11th. Hail fell on the 10th.

During the period ended Saturday, the 5th, the weather fell into a rough and rainy state, with squally S.W. winds and high but unstable temperature. On Tuesday, the 1st, and again on Thursday deep depressions skirted the western coasts of Ireland and Scotland, with the result that southerly to westerly gales prevailed, with rainy or showery weather in all parts of the country. On Tuesday night a subsidiary disturbance crossed England, where rain fell heavily. At 8 a.m. of Thursday, the barometer was down to 28·64 inches at Stornoway in the Hebrides. During the following night thunder and lightning occurred in the N.W. and N. of Ireland. Another depression passed by on Saturday, when rain fell heavily at times. One of the most striking features of the week was the high temperature experienced on Thursday, when the thermometer rose to 56° at Oxford, Cambridge, and Loughborough; to 57° in London, at Parsonstown, Shields, Leith, and as far north as Nairn; to 58° in Dublin, and to 59° at York. In Dublin the height of the barometer varied between 29·231 inches at 9 a.m. of Thursday (wind S.S.W.) and 29·888 inches at 9 p.m. of Friday (wind S.S.W.), Temperature in the screen rose to 58·0° on Thursday. The rainfall was ·258 inch on three days, ·195 inch being measured on Saturday. The wind was chiefly S.S.W.

Very unsettled, rough, wet weather prevailed in all districts during the week ended Saturday, the 12th. Sunday was the only thoroughly fine day, but before night cirriform cloud had overspread the sky from the westward, ushering in a deep depression, the centre of which had reached the portion of St. George's Channel between Wexford and Pembroke by 8 a.m. on Monday. A very perfect circulation of strong winds and gales round the cyclonic system was observed. The depression travelled across England and the North Sea to Northern Germany at a great rate. The accompanying rainfall was very heavy in and about Dublin and at Shields. On Tuesday another depression advanced to the North of Scotland, but this was soon overshadowed by a much more serious disturbance, near the centre of which the barometer fell to 27·93 inches at

8 a.m. of Thursday, the 10th, at Sumburgh Head in the S
Islands. At this time the barometer stood at 30·32 inches a
and 30·14 inches at Biarritz. Large quantities of rain or sleet
fell, and storms prevailed not only all over the British Island
France, Germany, and Scandinavia also. Thunder and l
occurred in many parts of Ireland and in the South of England
a few hours of fair weather on Friday afternoon the weath
became wet and stormy on Saturday. In Dublin the mean pres
29·550 inches, the barometer ranging between 28·814 inches a
of Thursday (wind, W.S.W.) and 30·037 inches at 9 p.m. o
(wind, W.). The corrected mean temperature was 44·3°. T
dry bulb temperature at 9 a.m. and 9 p.m. was 43·3°. The
thermometers rose to 54·2° on Thursday and fell to 33·5° on S
Rain fell daily, the total amount being 2·319 inches, and ·747 in
credited to Sunday, ·612 inch to Wednesday, and ·617 inch to S
The prevailing wind was westerly.

In the course of the week ended Saturday, the 19th, the
underwent a complete change over Western Europe. Until We
the 16th, the distribution of atmospherical pressure was cycl
the weather was for the most part rough, mild, and rainy; exce
North of Scandinavia, where severe cold prevailed, the ther
reading—12° on Sunday and—14° on Tuesday at Haparand
Gulf of Bothnia. In the rear of a depression, which lay over
and the North Sea on Wednesday morning, the barometer rose w
rapidity, so that by 8 a.m. of Thursday a tongue of high press
readings above 30·4 inches, stretched across Norway, the N
England, and the English Channel, to Normandy in France.
this zone temperature fell fast, so that sharp frost began to be f
inland English stations. In Ireland and Scotland, however,
winds prevailed and temperature remained steady or even r
Thursday night the thermometer fell to 22° at York and Loug
and to 25° at Oxford. The anticyclone continued to deve
Saturday, when the barometer exceeded 30·75 inches in Hol
Belgium. In Dublin the mean atmospherical pressure wa
inches, the range being from 29·011 inches at 9 a.m. of Sund
W.N.W.) to 30·497 inches at 9 a.m. of Saturday (wind, S.S.E
corrected mean temperature was 44·3°. The mean dry bulb ten
at 9 a.m. and 9 p.m. was 43·6°. The screened thermometer
54·8° on Tuesday and fell to 37·0° on Saturday. The rainfall
inch on four days, ·100 inch being referred to Monday. The p
winds were W.N.W. and S.S.E.

In the fourth week (20th–26th inclusive), very intense c
dense fogs, prevailed over the greater part of England until S
In the East of Ireland also the cold was of considerable inten

Christmas Day, when a thaw occurred, followed by rain and moderate to fresh S.W. winds on Saturday. Over the greater part of Norway and of Scotland and on the west coast of Ireland, there was an almost complete absence of frost during the week, owing to the prevalence of a southerly to westerly air-current in those localities. The cold in England was due to an anticyclone, which first formed on Thursday, the 17th, and persisted until Friday, the 25th. One of the most striking features accompanying the calm of the anticyclone was the density and persistence of the fog in the London district. For more than 70 hours the metropolis was wrapped in Cimmerian darkness by day as well as by night. In Dublin the fog was thick at times, but much pleasant sunshine was enjoyed at intervals. The mean height of the barometer was 30·226 inches, pressure decreasing from 30·610 inches at 9 a.m. of Monday (wind, calm) to 29·341 inches, at 4 p.m. of Saturday (wind, S.W.). The corrected mean temperature was 36·1°. The mean dry bulb temperature at 9 a.m. and 9 p.m. was 34·5°. The screened thermometers fell to 25·2° on Tuesday and rose to 54·7° on Saturday. Rain was measured on two days, the total quantity being ·047 inch, of which ·038 inch fell on Saturday. The prevailing winds were S.S.E. and S. The rise of temperature towards the close of the week spread from Spain across France to the British Islands.

As compared with the previous week, the closing period (27th–31st inclusive) was much milder; but the weather was in an unsettled, showery condition for the most part. The barometer was lowest over the Norwegian Sea, highest over the Peninsula. Temperature was generally above the average for the time of year over the greater part of Europe—the excess of warmth on the Continent on Wednesday and Thursday being particularly noticeable. Rain fell frequently, sleet and hail in Scotland, with a thunderstorm at Stornoway on Tuesday evening. In Dublin the rainfall was not very heavy, but the five days all yielded an appreciable measurement. The screened thermometers rose to 52·5° on Tuesday. The prevailing winds were S.W. and W., set in on the evening of the 31st.

The rainfall in Dublin during the year ending December 31st has amounted to 27·820 inches on 184 days, compared with 27·562 inches on 200 days in 1890, 27·272 inches on 193 days in 1889, 28·679 inches on 190 days in 1888, 16·601 inches on 160 days in 1887, and a 25 years' average of 27·696 inches on 194·8 days.

At Knockdolian, Greystones, Co. Wicklow, the rainfall in December, 1891, was 4·680 inches, distributed over 23 days. Of this quantity 1·160 inches fell on the 6th, and ·940 of an inch on the 12th.

From January 1st to December 31st, 1891, rain fell at Knockdolian, Greystones, on 178 days, and to the total amount of 34·949 inches.

Rainfall in 1891,

At 40 *Fitzwilliam-square, West, Dublin.*

Rain Gauge:—Diameter of funnel, 8 *in. Height of top—Abo*
3 *ft.* 2 *in.; above sea level,* 50 *ft.*

Month	Total Depth	Greatest Fall in 24 Hours.	
	Inches	Depth	Date
January, - - -	·672	·181	20th
February, - - -	·042	·024	13th
March - - -	·936	·220	14th
April, - - -	1·553	·482	3rd
May, - - -	2·792	·600	28th
June, - - -	2·753	·604	24th
July, - - -	2·187	·401	3rd
August, - - -	4·953	·985	8th
September, - - -	2·132	·563	19th
October, - - -	3·590	1·176	13th
November, - - -	2·911	1·229	10th
December, - - -	3·299	·747	6th
Total, - -	27·820	—	—

The rainfall was only ·124 of an inch in excess of the avera measurement of the twenty-five years, 1865–89, inclusive—vi inches.

It will be remembered that the rainfall in 1887 was very exc small—16·601 inches, the only approach to this measurement i being in 1870, when only 20·859 inches fell, and in 1884, measurement was 20·467 inches. In seven of the twenty-five question the rainfall was less than 26 inches, and in 1885 it w inches.

The scanty rainfall in 1887 was in marked contrast to the downpour in 1886, when 32·966 inches—or as nearly as possib the fall of 1887—fell on 220 days. Only twice since these rec menced has the rainfall in Dublin exceeded that of 1886—n 1872, when 35·566 inches fell on 238 days, and in 1880, whe inches were measured on, however, only 188 days.

In 1891, there were 184 rainy days, or days upon which not ·01 inch of rain (one hundredth of an inch) was measured. Th defect of the average number of rainy days, which was 194 twenty-five years, 1865–89, inclusive. In 1868—the warm dr recent times—as well as in 1887, the rainy days were only 16 1870 they were only 145. In 1868, however, the rainfall am 24·935 inches, or more than 8 inches above the measurement and even in 1870, 20·859 inches were recorded.

The rainfall in 24 hours from 9 a.m. to 9 a.m. exceeded one inch on two occasions, viz.—October 13th (1·176 inches), and November 10th (1·229 inches). On August 8th, also, nearly an inch fell (·985 inch).

Included in the 184 rainy days in 1891 are 12 on which snow or sleet fell, and 25 on which there was hail. In January hail was observed on 2 days, in March on 9 days, in April on 2 days, and in May on 8 days. Hail also fell once in June, August, October, and December. Snow or sleet fell on 3 days in January, on 7 days in March, on 2 days in May, and on 1 day in September, November, and December. Thunder occurred on nine occasions during the year—once in May and September, twice in June and July, and three times in August. Lightning was also seen on one occasion in each of the following months—viz., August and September, and three times in October.

The rainfall was distributed as follows:—1·650 inches fell on 32 days in the first quarter, 7·098 inches on 45 days in the second, 9·272 inches on 58 days in the third, and 9·800 inches on 49 days in the fourth and last quarter.

The rainfall in the first six months was only 8·748 inches, on 77 days—that is, not one-third of the year's record. In August, as much as 4·953 inches fell on 25 days.

Of the 9·800 inches which fell in the fourth quarter of the year, 3·590 inches were measured in October on, however, only, 13 days, and 3·299 inches in December on 21 days.

J. W. MOORE, B.A., M.D., Univ. Dubl.; F.R.C.P.I.; F. R. Met. Soc.

Abstract of Meteorological Observations taken at Dublin (40 *Fitzwilliam-square, West*) *during the Year* 1891.

MONTH	Abs. Max.	Date	Abs. Min.	Date	Mean Daily Max.	Mean Daily Min	Rainfall	Rainy Days	Mean Height of Barometer	Highest Pressure	Date	Lowest Pressure	Date	Prevalent Winds
	°		°		°	°	Ins.		Ins.	Ins.		Ins.		
January -	53·7	26th & 28th	23·9	7th	44·5	35·6	·672	14	30·085	30·875	14th	29·337	23rd	S.W., W.
February -	61·9	23rd	30·1	9th	51·0	38·3	·042	2	30·398	30·725	5th	29·824	26th	W., S.W. Calm
March - -	57·9	1st	27·1	12th	47·5	35·8	·936	16	29·858	30·470	3rd	29·052	15th	W., N.W., N.
April - -	65·7	30th	33·1	10th	51·3	40·0	1·553	14	29·964	30·342	20th	29·383	5th	S.E., E.N.E.
May - -	67·8	12th	32·8	18th	56·4	42·8	2·792	17	29·799	30·293	12th	29·237	1st	N.W., N.E.
June - -	73·8	23rd	43·9	10th	65·0	53·0	2·758	14	30·014	30·407	12th	29·457	29th	N.E., E.
July - -	72·8	16th	46·8	10th	64·8	53·2	2·187	15	29·936	30·365	14th	29·434	6th	N.W., S.W.
August - -	69·2	11th	45·6	30th	63·4	52·8	4·953	25	29·731	30·217	6th	28·949	25th	W., S.W., N.W.
September -	75·6	10th	44·8	7th	63·5	51·6	2·132	18	29·902	30·271	15th	29·076	1st	S.W., W., S.
October - -	62·7	4th	33·0	25th	55·0	44·0	3·590	13	29·626	30·647	31st	28·251	13th	S., S.W., W.
November -	57·8	18th	31·4	24th	48·1	38·7	2·911	15	29·782	30·693	5th	28·524	11th	S.W., W.
December -	58·0	3rd	25·2	22nd	48·0	37·9	3·299	21	29·818	30·610	21st	28·814	10th	W., S.W.. S.
Extremes,	°		°		°	°	Ins.	Days	Ins.	Ins.		Ins.	Oct.	W., S.W.

PERISCOPE.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

THE College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1892. Essays intended for competition may be upon any subject in Medicine, and must be received by the Secretary of the College, Charles W. Dulles, on or before May 1, 1892. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College.

HOW TO COOK A HUSBAND.

MORE than a decade ago, in the Baltimore Cooking School, the following recipe for "Cooking a husband so as to make him tender and good," was contributed by a lady, presumably of experience:—"A good many husbands are utterly spoiled by mismanagement. Some women go about it as if their husbands were bladders, and blow them up. Others keep them constantly in hot water; others let them freeze by their carelessness and indifference. Some keep them in a stew by irritating ways and words. Others roast them. Some keep them in pickle all their lives. It cannot be supposed that any husband will be tender and good managed in this way, but they are really delicious when properly treated. In selecting your husband you should not be guided by the silvery appearance, as in buying mackerel, nor by the golden tint, as if you wanted salmon. Be sure and select him yourself, as tastes differ. Do not go to the market for him, as the best are always brought to your door. It is far better to have none unless you will patiently learn how to cook him. A preserving kettle of the finest porcelain is best, but if you have nothing but an earthenware pipkin it will do, with care. See that the linen in which you wrap him is nicely washed and mended, with the required number of buttons and strings nicely sewed on. Tie him in the kettle by a strong silk cord called comfort, as the one called duty is apt to be weak. They are apt to fly out of the kettle and be burned and crusty on the edges, since, like crabs and lobsters, you have to cook them while alive. Make a clear, steady fire out of love, neatness, and cheerfulness. Set him as near this as seems to agree with him. If he sputters and fizzes do not be anxious; some husbands do this till they are quite done. Add a little sugar in the form of what confectioners call kisses, but no vinegar or pepper on any account. A little spice improves them, but it must be u judgment. Do not stick any sharp instruments into him to see becoming tender. Stir him gently; watch the while, lest he li and close to the kettle, and so become useless. You cannot fail when he is done. If thus treated you will find him very d agreeing nicely with you and the children, and he will keep a you want, unless you become careless and you set him in t place."—*Examiner* and *Times and Register*, Dec. 19, 1891.

ANTINERVINE.

This is the fanciful name given by the discoverer, Dr. Bra Philadelphia, to salicylbromanilide. It is a white crystalline odourless, having an acid taste, soluble in alcohol, ether, and wa and slightly so in cold water. The discoverer credits it wit antithermic, analgesic, and tonic properties. Acute rheumati ralgia, and *angina pectoris* are relieved by it, and in typhoid i headache and gives sleep. Our contemporary is not, however, about this latest addition to our therapeutic remedies, and e want of faith in its curative powers, and goes on to say that it chemical compound at all, but simply an admixture of the drugs:—Bromide of ammonium, 25 parts; salicylic acid, 2 acetanilide, 50 parts. Mix.—*Répertoire de Pharmacie*, No. 8, 1

LÉVOISNE.

M. Tanret (*Répertoire de Pharmacie*, No. 8) has succeeded in i new hydro-carbon, lévoisne, from cereals. He experimented su on rye, barley, and oats. To "lévoisne" M. Tanret has g formula $C_{48}H_{40}O_{40}$, the same formula as amidon and dextrine. the plane of polarised light to the left hand, hence the name; white colour, amorphous, insipid, soluble in water, very soluble alcohol, sparingly so in the strong liquid. It does not reduc and is not affected by alkaline solutions.

ANOTHER REMEDY FOR WHOOPING-COUGH.

M. Chibert declares that he has rapidly stopped the kinks of w cough by sprinkling finely powdered iodoform on the child's *Répertoire de Pharmacie*, No. 8, 1891.

ITCH OINTMENT.

The following formula appears in our contemporary, *Les Remèdes*, No. 13, for the itch:—Petroleum, 40 parts; white parts; alcohol, 50 parts; soap, 100 parts. Make an ointment.

THE DUBLIN JOURNAL

of

MEDICAL SCIENCE.

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THE DUBLIN JOURNAL
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MARCH 1, 1892.

PART I.

ORIGINAL COMMUNICATIONS.

◆

ART. VIII.—*The Control of Inebriates.*[a] By E. MACDOWEL COSGRAVE, M.D., F.R.C.P.I.; President of the Section of State Medicine in the Royal Academy of Medicine in Ireland; Professor of Biology, Royal College of Surgeons; Physician to Cork-street Fever Hospital and the Whitworth Hospital, Drumcondra.

THERE are few things more difficult than the successful treatment of inebriates, not from advanced pathological change, but from want of power to keep them from the cause of their diseased condition. For cure, abstinence for a prolonged period is requisite, but, unless the patient is anxious to be cured, and capable of a strong effort, failure is almost certain to result, so many are the temptations, so easily is drink obtained. To put the patient out of the way of temptation is, indeed, rendered possible by Acts of Parliament, but the procedure is so difficult and the treatment so expensive, as to be of but little use.

Medical men are far in advance of lawyers in recognising inebriety as a disease, and it was the interference of the lawyers in the House of Commons which kept the Habitual Drunkards Act from being more useful and workable.

The law has, however, for long recognised to some extent the disease element in inebriety. True, Sir Edward Coke, the highest

---

[a] Read in the Section of State Medicine in the Royal Academy of Medicine in Ireland, Friday, February 19, 1892.

legal authority of his day, wrote:[a]—"A drunkard v
tarius dæmon[b] hath no privilege thereby; but wha
soever he doth, his drunkenness doth aggravate it
Mathew Hale (middle of the seventeenth centu
"Although the simplex frenzy occasioned immediately
ness excuse not in criminals, yet if by one or more s
an habitual or fixed frenzy be caused, though this
contracted by the vice and will of the party, yet this
fixed frenzy thereby caused puts the man in the same
relation to crimes as if the same were contracted in
first"—thus recognising the important distinction b
drunkenness and that more advanced stage when t
turned into disease.[c]

Perhaps the best description of the inebriate, as
from the ordinary drinker, is that given by Dr. I
before the Select Committee on Habitual Drunkard
"We make a great distinction between the two classe
when he has taken one drink loses the power to contr
that direction; another man can take several, and be
But we cannot for the life of us tell why it is that b

---

[a] Coke. Institutes. 247. Blackstone's Commentaries. Bk. IV.

[b] "The laws claim that the drunkard is a voluntary madman. T
The inebriate does not voluntarily renounce control; on the contrar
can control his actions, while he cannot. Though he does not know
lyses inhibition."—Dr. T. L. Wright, Bellefontaine, Ohio. Society
Inebriety. Jan. 6th, 1891.

[c] It will be seen from the following extracts that the law on t
unsettled:—

"Leeds Assizes, December 11, 1891, before Mr. Justice Wright, Joh
indicted for causing grievous bodily harm with a red hot poker to E
Doncaster, on July 18th. His counsel, Mr. B. G. Wilkinson, urged
while the prisoner was drunk, and unable to tell what he was doin
said it was impossible to accept the statement that the prisoner v
excuse in law. For doing a thing of this kind a man must answer w
sober. Society could not exist if such a plea were to be allowed.
however, evidence showing that the prisoner was in a completely
intoxication."

"On the same day, before Mr. Justice Lawrence, Liverpool, John
for the murder, under shocking circumstances, of his wife, Jane Mi
November. Miller, who was a blacksmith, was a heavy drinker,
influence of drink when he battered his wife's head in with a hatc
apparent cause. His lordship, in summing up, said: 'It was quite r
should consider whether a man could drink himself into such a condit
incapable of forming any intention, and that he had no control over l
was proved to them satisfactorily, then the crime would be reduced
that of manslaughter.'"

has taken one drink he must go on until he is saturated with it, without any power to stop. We look upon that man as actually diseased with alcohol, and only that class."[a]

The Inebriates Acts, imperfect as they are, have, at any rate, formally recognised the disease element in inebriates, who are thus defined:—"Those who, notwithstanding the plainest considerations of health, interest, and duty, are given over to habits of intemperance so as to render them unable to control themselves, and incapable of managing their own affairs,[b] or such as to render them in any way dangerous to themselves or others.[c] [d]"

For practical purposes, the inebriates for whose treatment we require extended powers may be divided into two classes:—

I. Those who cannot resist the temptation to drink, but will at any cost or sacrifice gratify the craving.

We all meet such cases too frequently, and know the difficulty of influencing them. I have frequently explained that to go on drinking meant death, and have convinced the patients of the fact without at all altering their habits. I have stood by whilst patients were told that they were getting into financial difficulties and that nothing but a sudden pull up could avoid a crash; they have acknowledged and deplored the fact, but made no change. I have pointed out to fathers how they were destroying the happiness

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[a] Answer 3072.

[b] A commission of lunacy was supported against a person who, when sober, was a very sensible man, but, being in an almost constant state of intoxication, he was considered incapable of managing his property.—Collinson on Lunacy. Vol. I., p. 71. Quoted by Dr. R. B. Grindred in Bacchus. P. 505.

[c] "Law of Parent and Child in Jersey.—The Attorney-General appeared before the Royal Court, on Saturday, and called on the judges to deprive Mr. Nicholas Anthoine, clerk to the Impost Office, of the right of control or management of his children, he being an habitual drunkard, and that the said Court should appoint fit guardians for the said children. The Attorney-General stated that the persons directed to inquire into Mr. Anthoine's conduct had reported that he had often been seen drunk, and, whilst in that state, had danced in the streets, gathering a crowd around him, and was, consequently, unfit to be an example to a growing family, and unfit also to be entrusted with its control. The Solicitor-General, on behalf of Mr. Anthoine, contended that the articles exhibited were insufficient to warrant the Court in inflicting so serious a penalty on any man as depriving him of the control of his own family, and instanced his being able to conduct the affairs of his office as a reason against granting the prayer of the citation. The Attorney-General replied, again urging the prayer of the memorial. The chief and other judges confirmed the Attorney-General's demand, and ordered that the defendant's family be given into the guardianship of a proper person chosen by their nearest relations, with the approbation of the Court."—Quoted from a Jersey paper of 1837 in Bacchus. P. 506.

[d] Report. P. v.

of their wives and children; I have pointed out
neglected condition of their children and the dirt
Both fathers and mothers have heard me, assented
fact—and continued drinking. Indeed, in many ca
have I felt that I have longed for a complete physic
such as an attack of *delirium tremens*, in the hope
physical prostration might give a chance of cutting
of stimulants, and that possibly after such a shock s
might be made on the weakened moral nature, so
thus broken might not be resumed.

Such cases as these are sometimes hereditary, some

II. Those who suffer from intermittent attacks,
potu, who go on for long periods, even months, with
desire for drink, and then having tasted drink s
trouble, or sometimes, with no discoverable cause,
drink, morning, noon, and night for days, perhaps ev
In one case I have noted, the attacks used to come
year. The gentleman would lock himself into a room
of brandy, no one daring to interfere with him until
two or three days all noise ceased; his relatives wou
open the door and find him comatose. Between
attended to a large business, and took a leading pa
and charitable work. The description of such a
Besant in "The Demoniac" is scarcely an exagg
reality.

These cases are generally examples of hereditary

In both classes of cases "total abstinence is the
sure road to recovery."[a]

In the first class nothing else will stop the craving
alcohol in any form is taken the wish for it will
when it is given up for a time the craving becomes
also improvement in the physical and moral conditio
better taken, the strength improves, and the patient
to some extent be relied on.

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[a] Dr. D. S. Dodge, Physician to the New York State Inebria
the Select Committee on Habitual Drunkards. In Answer 2973 h
physiological fact that when a habit has been formed or contr
removal of the agent that produced the habit is necessary in order t
things may become possible. Place before a patient a liberal suppl
nutritious food, and ask him to starve himself to death; nature is
will—it is an impossibility. Place alcohol before him and ask an
himself gradually; it is equally an impossibility."

In the second class of cases the natural tendency is for the attacks to become more frequent, and their effects more lasting, so that gradually the system breaks down. The only hope in such cases is to reverse this process, to tide over attacks, and so prolong the intervals and render the impulse more easy to resist.

To keep either class in their own houses from drink is more than difficult—their ingenuity, their unscrupulousness, and the certainty that some about them will help to supply drink, render treatment nearly hopeless. Not long ago, whilst helping to place a patient suffering from alcoholic paralysis on a water-bed, I found a bottle containing whisky under her pillow, and yet for days she had been unable to leave her bed, and everyone who had access to her room professed to be trying to keep drink from her. In another case, which also ended fatally, nine brandy bottles were hidden about the bed. Even in hospitals we all know how difficult it is to prevent stimulants reaching our cases.

For successful treatment such cases must be admitted into institutions where they can be controlled—not allowed to have drink sent in, not allowed to go out for it. Our power in this direction is certainly limited. Patients must either go voluntarily into a lunatic asylum,[a] where they cannot be detained if they wish to leave; or be sent to Belgium[b]—a course which has manifest disadvantages; or be treated under the Inebriates Acts, 1879 and 1888, which, unfortunately, impose so many difficulties that they are made but little use of in England, and are altogether unused in Ireland. During 1890 only 109 patients were admitted into Retreats under the Acts,[c] and this was a higher number than in any previous year.[d]

The powers given by the Inebriates Acts (the expression "Habitual Drunkards" was struck out by the amending Act of 1888, which also made the former ten-year Act permanent) are briefly as follows:—

Justices of the Peace may grant a license for any period not exceeding thirteen months to any person or persons to keep a retreat for habitual drunkards. One of the licensees must reside on the premises and be responsible for its management, and if the licensee is not on the Medical Register a duly qualified medical man must be employed as attendant. No such l granted to any person licensed to keep a lunatic asyl

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[a] Under 29 & 30 Vict., cap. 57.

[b] Cf. British Medical Journal. November 7th and 14th, 1891.

[c] Eleventh Annual Report of the Inspector of Retreats under the Inebriates Acts, 1879 and 1888, for the Year 1890.

[d] 1885, 77. 1886, 73. 1887, 66. 1888, 99. 1889, 78. 1890, 109.

An habitual drunkard who wishes to be admitted i must apply in writing to the licensee, and state th which he undertakes to remain. The application mu panied by the statutory declaration of two persons t cant is an habitual drunkard, and his signature must b any two Justices, who must state that he understood of his application, which must have been explained applicant may then be detained for the whole of term, which must not exceed twelve months.

From the passing of the first Act medical men ha complained of its inadequacy, and the very small made by the amending Act has been deplored. T the deficiencies of the first Act has already been br this Section by Dr. Tweedy.[a] The frequent discu subject by the Society for the Study of Inebriety public opinion in the same direction, and has helped our requirements. The special committee of the Br Association has also done good work.[b]

In Scotland feeling is so strong that, in 1890, excellent Restorative Homes Bill, approved by leadin the medical and legal professions, was introduced int A similar movement is going on in other countr America, where legislation on this matter is much i England. An important bill, in which the Emperor interested, is likely soon to become law in Germany.

Now to deal shortly with what is required.

I. Voluntary entrance into an inebriates' home sho much easier. The necessity of appearing before tw especially odious. It is not at all easy to get two Jus consequent delays and disappointments (added to the licity) have kept many cases from treatment. Surel

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[a] State Control of Chronic Inebriates. Transactions of the Acad in Ireland. 1884.

[b] "For years past your committee has, with the Society for the St been urging on the Government the need for an inquiry into the Inebriates Act, 1879."

"Existing legislation has these chief defects: There is no provis admission of a voluntary applicant for reception in a licensed retrea bidding by an enforced appearance before two Justices; and an received and detained in such a retreat only at his own request." Report of Inebriate Legislation Committee to the British Medical As ought to be enough. The British Medical Association and the Society for the Study of Inebriety have urged this change, which has also been recommended by the Government Inspector of Retreats.[a] As one magistrate can at present commit a person of unsound mind to a lunatic asylum, surely one might be trusted to commit an inebriate to a retreat.[b]

It would, indeed, make the Act much more workable if entrance was still more simplified, and no appearance before a magistrate required. In Mr. Morton's Restorative Homes Bill it was suggested that in entering a Home the transaction should be merely with the superintendent of the Home. The application (signed by the applicant and two respectable witnesses) engaged that he would remain in the Home subject to the provisions, rules, and regulations until discharged. One of the provisions was that the time of detention should be twelve months, unless circumstances rendered it expedient to discharge him sooner.

Dalrymple's original bill had a practically similar provision. With all the safeguards for inspection and appeal that are in the present Acts, no harm could arise from entrance into a Retreat being made comparatively easy.

II. There should be power to send people to inebriate asylums; this power to be invoked by the person's family or friends, or by the public authorities. Magistrates to have power to commit, or this power to be given to an inspector, who should summon a small jury to try the case, the accused to be present and heard in his own defence. The very possibility of such action being taken would have a restraining effect in many cases. If able to pay there should be power to compel payment.

III. Provision for poor cases is urgently needed. This would, of course, cost money, but if it led to the cure of inebriates it would lessen police court, workhouse, prison, and lunatic asylum[c] charges. The cost need not fall on the general body of the ratepayers. The inmates should be required to work to help to meet the cost of their support, and part, if not all, of the residue

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[a] Seventh Annual Report. 1886.

[b] A declaration before one Justice is required in South Australia, Victoria, and New Zealand.—Inebriety. Dr. Norman Kerr. Ed. 2, p. 378.

[c] "I am greatly concerned that, whatever principle is adopted in future legislation in regard to the restraint of drinking, the 400 cases who year by year in Scotland are made absolutely insane by drink shall in some way be considered and provided for, as well as the ordinary habitual drunkards."—Seventy-seventh Annual Report of the Royal Edinburgh Asylum for Insane.

might fairly be drawn from the trade which makes a
inebriates. This would be no harder on "the trad
Ritchie's proposal that they should form a fund to
own, so-called, vested interests. This plan has bee
other countries. The Inebriates' Home of King's
York, gets 12 per cent. of the license moneys.[a] This
which might well be followed.

The small fines and short terms of imprisonme
imposed for drunkenness are wholly inadequate. T
lating the fines is 4 Jac. I., c. 5., and prescribes a "
5s., or the sitting six hours in the stocks, by wh
statute presumes the offender will have regained h
not be able to do mischief to his neighbours."[b] T
good treatment when drunkenness was only occasiona
chronic "drunks" of the police courts seven days'
just gives them time to pull themselves together at t
the ratepayers, and to be ready for a fresh spree w
discharged. It would be much better that the sen
each time be made longer, and that anyone who was
drunkenness a certain number of times[c] in one ye
committed to an inebriate asylum.

In New York the trustees of the Inebriates' H
the county jail and chose from the imprisoned for i
habitual drunkenness such as they think fit sub
Inebriates' Home. On the certificate of the Presiden
the jailer hands over the prisoner to the authorities

IV. There are defects in the present Acts which
add to the difficulties of the licensee.[e] Thus a pati
escape if he likes, and the licensee has no right to us
vent him; and so he can go out, get drunk, and com
a disturbance. There is no punishment for such a
for having had drink, and the Home Secretary will
When expenses are incurred by the issue of a wa
bringing the patient back from a distance, there is
compelling the patient or his representatives to pay

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[a] Inebriety. Dr. Norman Kerr. Ed. 2, p. 358.

[b] Blackstone. Bk. IV., ch. 4, x.

[c] In South Australia any person convicted of drunkenness thre
months can be committed to a Retreat.

[d] Inebriety. Dr. Norman Kerr. Ed. 2, p. 358.

[e] Cf. Dr. F. J. Gray's paper, read before the Society for St
Oct. 3rd, 1888.

is no punishment for a patient who asks for an inquiry if his complaint proves to be frivolous and vexatious.

V. The part of the liquor traffic which consists in encouragement of drunkenness should be suppressed.[a] I have known a husband caution the publicans and spirit grocers of the locality not to supply drink to his wife without his word having the slightest effect. His things were pawned, drink was procured, and in some cases the bills for it were sent in to him, the dealer calculating that he would pay rather than make public his misfortune.

It has been suggested that a "Register of Drunkards" be kept by the police and copies given to dealers in liquor, who shall not be allowed to sell to any on the list.

In Prince Edward's Island when proper notice in writing is given to any dealer in intoxicating liquor that a person is addicted to drink, he is not allowed to sell him any intoxicant. The penalty for the first offence is a fine of not less than £5; for subsequent offences a fine of between £5 and £10 and imprisonment for a period not exceeding thirty days.[b]

I have brought this subject before the Section, believing that in many cases inebriety is a disease closely allied to insanity and susceptible of successful treatment, if power is given to keep the patient from drink for a sufficiently long period; and believing that the sooner the case is taken in hand the more is the probability of cure. I trust that my paper, short and imperfect as it is, may be the starting-point of an important discussion.

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[a] There is a statute in Pennsylvania which provides that saloon-keepers shall be ld responsible in damages for injuries resulting from their sale of liquors to intoxiated persons. The Supreme Court of the State has lately made a decision which ustains the law as constitutional and equitable. A poor widow sued a liquor seller ecause he sold liquor to her husband until he was unable to guide his steps homeward, ll into a gutter, contracted pneumonia, and died. A jury gave the widow substantial amages, and upon appeal the Supreme Court sustained the verdict and the law. It rushed away without much ceremony the pleas made for the saloon-keeper that neumonia, and not liquor, was the immediate cause of death, and that the man took he liquor voluntarily. The Court thus replied to the last plea: "Every drunkard ot only takes liquor voluntarily, but whenever he can get it, and because of his eakness the law makes the saloon-keeper responsible for selling to such persons. He as not the will-power to resist the temptation, and for this reason the sale to him is rbidden."

[b] Inebriety. Dr. Norman Kerr. Ed. 2, p. 367.

ART. IX.—*Oöphoritis: its Causes and Treatment.*

MORE MADDEN, M.D., F.R.C.S. Ed.; Obstetric P
Gynæcologist, Mater Misericordiæ Hospital, Dublin

ALTHOUGH the study of ovarian disorders (includin
well as inflammatory diseases therein) has become so
loped within a comparatively recent period that a di
of lectures might now be profitably devoted to this sp
it may, nevertheless, I think, be found possible to con
a very brief space all that is of immediate practica
with regard to the general pathology and treatment o
matory affections to which the ovaries are subject.

Acute Oöphoritis.—Whatever may be the case else
Mater Misericordiæ Hospital, at least, acute inflamm
ovaries is by no means uncommonly brought under
observation, especially in patients originally admitted
ment of dysmenorrhœa. The frequency of this dis
observed in these and other instances is, however,
would appear to be the case in the experience of
gynæcologists. Thus, for instance, one of the most
authorities on this subject, Dr. Emmet, of New York

"Primary interstitial inflammation, or (according
inflammation of the ovarian stroma, occurs very se
non-puerperal state, especially if we exclude slight
hyperæmias, which are frequently developed in the
during menstrual congestions, and other determinati
Schroeder states: 'Two forms of oöphoritis are to be d
the parenchymatous, or follicular, in which the struc
of the gland, the Graafian follicles, are inflamed, and
tial, in which the connective tissue stroma is inflamed
tion of the glandular part of the Graafian follicles is,
the investigations of Slavjansky, very frequent.' S
others designate a third form due to 'inflammation
toneal covering of the ovary,' but, as recent observe
able to demonstrate the fact that the ovary is not co
peritoneum, this form cannot be accepted without f
nation. The surface of the ovary undoubtedly beco
but this is due to its close connection with the pe
that any inflammation of this membrane in the neigh

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[a] Vide Principles and Practice of Gynæcology. By Thomas Add
Third edition. P. 649.

the ovary must involve that organ. This is so common that we believe the ovaries suffer far more from peritonitis or cellulitis in their vicinity than from disease originating within or confined to their own structure." Scanzoni met with only a single case of non-puerperal acute oöphoritis, where, in consequence of death from pneumonia, he was able to study the exact pathological changes. After describing the *post-mortem* condition he says: "The pathological alterations which we have met with in this ovary correspond perfectly to the description which some authors have given of acute ovaritis; considerable increase in the size of the organ, notable hyperæmia, traces of effusion in the vesicles, purulent foci in the parenchyma, and fibrinous exudation under the peritoneal envelope of the organ. After what precedes, it may be seen that in this case we had a combination of the three forms of ovaritis, which confirms our assertion on the subject of the rarity of its existence in an isolated form."

Ætiology.—Besides these dysmenorrhœal cases in connection with which, as already mentioned, we here meet with ovarian inflammatory conditions in a larger proportion of instances than, according to the writers just mentioned, might be supposed, acute oöphoritis also comes before us as the result of uterine sepsis or puerperal inflammation, and still more commonly than in either of the above cases it occurs as a consequence of gonorrhœal infection, being, as Sir Spencer Wells has observed, "probably of much more frequent occurrence than acute orchitis is in the male." The testicles are more liable to mechanical injuries, but are probably not more liable to extension of the poison of gonorrhœa or of its sympathetic effects, and they are free from the periodical hyperæmia which may be regarded as the first step in the process of ovarian inflammation. This periodical hyperæmia, influenced by accidental sudden suppression of discharge of blood from the uterus, is the usual history of an attack of oöphoritis. Amongst its other occasional causes have also been enumerated exposure to cold, particularly soon after delivery, local injuries, acute tubercular disease, the use of emmenagogues and of substances employed to procure abortion, the metastasis of rheumatism or of other diseases which in the male might similarly produce orchitis, and lastly inordinate or premature sexual excitement, or coition too soon after parturition or too near the menstrual period.

Symptoms.—In the majority of cases of this kind admitted into the Hospital the leading symptoms of the disease were continuous dull or burning localised pain on either side just abov physis pubis, increased and extending its area on motic together with some fulness or tumefaction over the affe though this is not always externally or vaginally r until a digital examination per rectum is made by swollen and painful ovary may be readily distinguish over, in such cases there is invariably more or less co febrile disturbance, generally a high temperature, vomiting.

Treatment.—In the treatment of acute oöphoritis th to be added to the old and often effectual routine o hot anodyne stupes, and, if necessary, leeches, over pain, saline purgatives, hot baths, and vaginal irrigati bromides or other sedatives to relieve pain, conjointl administration of iodide of potassium in full doses, or curial, such as grey powder, or Plummer's pil. calomelan three or four-grain doses, with as much antipyrin every until the inflammatory action has been thus subdued.

Chronic Oöphoritis.—Chronic inflammation of the o I am convinced from clinical observation, also a mo disease than is generally recognised, and not unfrequent to symptoms wrongly ascribed to other morbid conditio over, its consequences are so far-reaching, giving rise, to a long chain of reflex and nervous complications, an ment by any of the remedial measures ordinarily e often proves unsatisfactory, that fuller consideration devoted to these cases than has been just given to the of ovaritis, or oöphoritis as it is more generally termed

Causes.—In the majority of the instances of chronic with which we have here to deal, this condition is sequence of the acute and more particularly of the form of the disease, which has been already sufficientl In some instances, however, we are unable to trace the to any well-marked attack of acute ovarian inflammat such cases it may arise from tubercularisation within itself. The importance of tubercular disease in this r common factor in the causation of chronic oöphoriti since pointed out by M. Bernutz,[a] whose very clear tion we may here follow with regard to the great between such cases and those of tubercular orchiti details of the one, the symptoms during life, and the appearances after death, corresponding with those of the other. There is first the changes in the ovaries; the one, a shapeless mass exactly resembling a testicle destroyed by tubercle; the other containing softening tubercle in its carnified parenchyma, represents a tuberculous testicle. Then, the pathological condition of the tubes, the mixture of pus and softened tubercular matter which they contained, and the tubercular infiltration of their mucous membrane, exactly corresponds with the alterations of the epididymis and vas deferens in tubercular orchitis. Moreover, the condition of the pelvic peritoneum, the serous collections in some places, the purulent in others, and the more or less advanced tubercular deposits of which it was the seat, present us with an almost absolute identity with the alterations of the tubercular tunica vaginalis. Lastly, the tubercularisation of the mesenteric glands, and the miliary infiltration of the lungs, complete the analogy of the cases in the two sexes. Nor is the analogy less complete in regard to the symptoms. The earlier symptoms correspond with those occurring in the male; the pelvi-peritonitis arising in the one from tubercularisation of the ovaries, while in the other the tubercular orchitis is the starting-point of the mischief. This form of pelvi-peritonitis presents this remarkable peculiarity that, notwithstanding its apparent benignity, it almost invariably results in suppuration, which presents the character of spurious peri-uterine phlegmons. After puncture, pus, or even with it part of the ovary, escapes per rectum; this evacuation is followed by a temporary improvement, similar to that which follows in tubercular orchitis, where a puncture or incision of the distended tunica vaginalis allows the escape of pus and testicular *débris*. Then follow alternations of improvement and exacerbation, during which the constitution becomes seriously altered, and signs of pulmonary tubercularisation appear, just as obtains in tubercular orchitis.

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[a] Vide Bernutz and Goupel's Clinical Memoirs. Diseases of Women.

Symptoms.—No disease met with in gynæcological practice is probably more obscure and insidious in its inception than chronic oöphoritis, or less definite in its general symptoms, of which the most constant are anæmia and hysteria, associated with or dependent on the disordered function of the diseased ovary—*i.e.*, imperfect and generally painful menstruation. These symptoms are obviously of no pathognomonic value until their special significance in such cases has been elucidated by properly-directed local examination; and before that is deemed necessary the symptoms

of oöphoritis are liable to be confounded with th
the uterine flexions or displacements met with in
ovarian disorders. Or else, those symptoms of
erroneously ascribed to hysteria from the circumsta
nervous derangements of this kind being very gene
on ovarian irritation.

Any doubt regarding the diagnosis of these cases
readily be cleared up by a conjoint or bi-manual e
rectum and externally, on which the enlarged and
the case be one of oöphoritis, can be at once detected
examination then further revealing some tenderness
tumefaction on either or both sides of the hypogast
Poupart's ligament. Under such circumstances,
also be present some degree of constitutional di
evidence of general hyperæsthesia, or hysterical excita
with derangement of the menstrual health, whethe
of dysmenorrhœa, suppression, or other catamenial
ovulation being necessarily imperfect or painfully a
an ovary thus disorganised—we need have no he
diagnosis of the case as one of chronic oöphoritis.

In those displacements of the ovaries which have
by me elsewhere, and more especially in their
form—viz., prolapse of the ovary into Douglas's
placement, if not soon remedied, almost always eve
inflammatory changes in the necessarily tumefied
dislocated gland. And to this condition in these
all other cases of chronic oöphoritis, attention is f
the great majority of instances by the intensity of
dysmenorrhœal suffering.

As already observed, acute inflammation of the ova
or not aborted by proper treatment, seldom termi
lution, but more commonly gradually subsides to
and so passes into the chronic form of the disease.
may, and the latter very frequently does, when t
result in the complete disintegration and softening
of the affected organ, leading to suppuration. In
ovary may eventually, as I have seen in some ins
converted into a thin-walled pyogenic cyst, contain
of intolerably fœtid pus. In one of these cases
formed ultimately ruptured into the peritoneal
caused the death of the patient. In the other I

effect the removal of the cyst, which contained a large amount of pus. Fortunately, however, the consequences of chronic oöphoritis are by no means generally so immediately grave as in the cases just referred to; and in a larger number of instances of this kind the chief pathological conditions thus produced are congestive hypertrophy of the implicated glands and hyperæmia of the adjacent peritoneum, leading, possibly, to plastic, serous, or hæmorrhagic exudations or effusions—the latter, probably, affording an explanation, in many instances, of the symptoms which are generally described under the names of pelvic peritonitis, cellulitis, and also of pelvic hæmatocele. On the other hand, the ovaries after long-enduring chronic inflammation in some instances eventually become atrophied, hard, and nodular. Moreover, it should also be borne in mind that, as was pointed out by Dr. Graily Hewitt, chronic inflammation of the ovary does not necessarily always leave behind it any permanent alterations such as I have described, and that, as he says, "at the end of sexual life ovaries which have been the seat of ovaritis for years may present nothing remarkable."

Treatment of Chronic Oöphoritis.—In the milder or less-marked forms of subacute or chronic ovarian inflammation, the most serviceable plan of treatment will be found in the use of counter-irritation by liniment of iodine or blistering, followed by inunction of oleate of mercury with morphin over the affected gland, together with the long-continued use of bichloride of mercury in doses of the one-twenty-fourth of a grain thrice a day, with which may be advantageously conjoined iodide of potassium in efficient doses and given in combination with bark and other tonics. At the same time, bearing in mind the commonly observed association of an anæmic and hysterical or neurotic constitutional condition with this disease, whatever other treatment may be resorted to, the administration of bromides of potassium or sodium, together with valerian or other special nerve sedatives and tonics, such as the valerianates of quinine and iron, should never be omitted from the treatment of these cases.

It must be admitted, however, that in not a few instances these and all similar methods of general treatment prove wholly ineffectual in chronic ovarian inflammation or irritation. Dr. Emmet, whose remarks on this subject are well deserving of our consideration, may be here quoted:—"It is difficult to afford any marked relief during the menstrual life of the woman. Within

the whole range of the disorders to which women are li
as a rule, present so uncompromising an outlook as this
patient and physician. A serious state of anæmia ex
these cases, and the condition has already long reache
when it would be of little importance to determine wha
cause and what was the effect. The close relatior
through the sympathetic system, between the generativ
and general nutrition has already been treated of. D
menstrual life of a woman, the dominant influence is t
is emitted from the ovaries, and when normally directe
potent stimulus to healthy nutrition. It can, then,
understood that to correct this extreme state of anæ
ovulation itself is so imperfect, must be difficult. After
pause, however, the sympathetic nerves again become d
their relation to sexual functions, as before puberty
chiefly concerned in correcting and repairing the defect
tion. There are many cases where, by judicious treatm
early stage, health can be regained. In other instanc
known the reparative powers of nature to prevail, after
ficial means had been resorted to, and the cases regarde
less. We should, then, never despair in any case.
prognosis often turns on the degree of judgment with
case has been treated by the physician in charge of
beginning. Many a woman has been rendered incurab
sequence of the opium habit, contracted at the instiga
ignorant or careless medical adviser. Of all drugs nor
potent than morphin to produce anæmia, and to cause
by a long continuance of its own poisonous effects. I
several instances of so-called oöphoritis in which morphi
freely used for years to relieve pain over the region of t
and in which, under more judicious management, an im
in the general health took place, and all pain disappea
or three months after the opium habit had been brok
have no doubt that there are cases of local neurosis du
sure exerted by the contraction of ovarian tissue. In t
the pain not only continues, but will become worse, if t
anodynes is discontinued. But in the beginning, the
use of opium doubtless aids in producing an anæmia wh
otherwise not occur; and it may even induce inflammati
ovarian tissue, through its deleterious influence on
After a certain stage has been reached in the use of mo

few victims will have the courage to make a real effort to get rid of the evil; in fact, the chances for reform from the opium habit are less promising than those for a full restoration of the lowest drunkard from the gutter. But the attempt at reform must be the first step, and the habit must be broken up if possible, for so long as it exists no accurate idea can be formed of the local condition. To direct any special course of treatment is impossible, since every function of the body will be impaired to a greater or less degree."

Nevertheless, I would venture to take a somewhat more hopeful view than Dr. Emmet does of the general treatment of these cases, having, in many instances, found all the well-marked symptoms of oöphoritis amenable to the therapeutic measures to which I have already referred; whilst even in these still graver cases, in which chronic oöphoritis has resulted in suppuration, I see no reason why you should not, in the first instance at least, empty the ovarian abscess by aspiration, and then wash out the cavity with an iodised injection, as I have myself done, with satisfactory results under such circumstances. Should that course, however, be contra-indicated, or prove useless, in these cases, as in all other instances of severe oöphoritis in which, after a fair trial of other measures, the gravity and urgency of otherwise irremediable constitutional or neurotic, as well as of local, symptoms are such as to call for immediate treatment, we will then be justified in resorting to the extirpation of the diseased gland. This may be accomplished in either of two ways—first, by simple oöphorectomy, an operation which, although long previously suggested by Blundel, was first carried into effect in 1872 by three surgeons operating almost at the same date, in different countries and without knowledge of each other's procedure—viz., Dr. Battey, at that time of Georgia, Mr. Lawson Tait, of Birmingham, and Dr. Hegar, of Freiburg; or secondly, and as I think far preferably in the cases now under consideration, the same object may be effected by Mr. Lawson Tait's own more rational and scientific operation, the advantages of which, when thus necessitated, in suitable cases and conditions, has been established beyond any possibility of controversy by the brilliant results in Tait's hands of that operation—viz., the removal not only of the affected ovaries but also of the Fallopian tubes.

ART. X.—*Multiple Abscesses of the Brain.*[a] By
PARSONS, M.B., Univ. Dubl.; late House Surge
Dun's Hospital, Dublin.

A COMPLETE and accurate diagnosis of intracran
often beset with difficulties. It demands that we sl
not only to state the site of the lesion, but also to
nature. Guided by what experimental research and
investigation have taught us of the functions mo
connected with certain regions of the brain, we atte
the first part of the demand chiefly from the foc
which the patient presents, while in the clinical h
disease and the general constitution of the sufferer
find some indication of the nature and cause of the
cess itself. A very limited acquaintance, howev
symptomatology of organic cerebral disease is suffic
that in many cases we have to base our diagnosis a
the general as distinguished from the focal symp
former class of symptoms accompanying, as they do
or less extent, pathological processes situated in parts
remote from each other, enable us to do little more
ture what the site of the lesion is; we are, consequ
in the absence of focal symptoms and of any ind
the nature of the mischief, unable to form a more
diagnosis than the vague one of "Intracranial disease."
can be cleared up in no other way than by a *post-m*
nation; and it is frequently at the autopsy a matter
ment that the extensive lesions found after death did
to more distinct focal manifestations during the life o

The specimens which form the subject of this
removed from a patient who was admitted to Sir P
pital last November in an enfeebled state of min
The condition of his intellectual capacity may be
the fact that, though a gardener by occupation, an
sumably, with more highly cultivated faculties than
labourer, he was unable to perform the most elem
metical calculations, to count backwards from twe
only reply to the usual question respecting his age w
be 45 or 60," given in a tone which plainly indicate

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[a] Read before the Section of Pathology in the Royal Academy
Ireland, on Friday, January 22, 1892.

not think there was much difference between them. His inability for physical exertion was manifested on trying to stand, as, if unsupported, he at once fell and was quite unable to make any attempt at walking without two assistants. The meagreness of the following clinical notes, taken by Mr. Morton, clinical clerk, is to be largely attributed to the patient's failing memory:—

Case.—A. B., aged forty-five (?), a gardener, was admitted to hospital under Dr. Finny's care, on the 11th of November, 1891, complaining of severe headache which he states is continuous, of a purulent discharge from his right ear, and of loss of power over his lower limbs. He says that he cannot walk or even stand unsupported, but that if assisted for some time he can do so. No accurate account of the time or order in which these symptoms manifested themselves can be obtained from him, and the general reply to an inquiry directed to the duration of any one of them is that he has had it for three months. An examination of the cranial nerves failed to disclose any lesion which could with certainty be assigned to them. The movements of the eyes were quite free in all directions. There was no facial paralysis, and there did not appear to be any loss of sensation in the face. Mastication seemed normal, deglutition unimpaired, articulation distinct, movements of tongue good. He stated that his sight was failing, but an examination of the fundus on different occasions showed the absence of any pathological change. His hearing was defective, but this was attributed to a chronic purulent otitis media, with almost complete destruction of the membrana tympani of the right ear.

Upper Extremities.—The grasping power of each hand was quite good. Movements of left arm were not involved, but though he could readily lex his right arm, he had some difficulty in raising his hand to his head, nd complained of pain in region of right shoulder on trying to do so. n attempt to ascertain the condition of sensation was unsatisfactory, wing to his contradictory statements.

Lower Extremities.—Power in the lower limbs was diminished, but he as able to draw them up when told to do so, or to raise them off the ed. The deficiency was more marked in the left than in the right. nkle clonus could be obtained in either limb, but much more easily in e left, in which also the patellar reflex was somewhat more exaggerated an in the right. It was impossible in the lower limbs, just as in the pper, to draw any conclusions concerning his sensation. There was an fusion into his left knee-joint, which subsided considerably.

Bladder and Rectum.—There was no loss of control over these viscera. he urine had a specific gravity of 1022, gave a large precipitate of thates, but contained no albumen. Constipation was troublesome, as e bowels generally acted only after enemata.

Nothing abnormal was detected by examination of the
abdominal organs.

On admission his pulse was 72, and respiration 28 per
former, during the course of his illness, on only two occasi
100; and the latter, except once, when it reached 42, varie
and 30. The temperature was very irregular, ranging f
100° F., but not exceeding the latter number except on t
the day of his death, when it rose to 101° F.

On the 18th of November vomiting set in, and the emac
daily more evident.

The clinical note for 23rd of November is that the patie
decidedly worse. He complains greatly of pain in his hea
be getting deafer and more stupid. Pulse (68) and respirat
a great want of proportion. Vomiting more frequent t
On one or two occasions he complained of pain over the
process, but there was no superficial œdema, redness, or
pain on pressure, when contrasted with the opposite side, t
inflammatory process in the mastoid cells. As a rule, he
night, though he woke up rather frequently, complaining
in his head was so severe that he could not sleep. Th
emaciation became more marked day by day, till his death
of November, just fifteen days after his admission to hospit

Post Mortem.—The head alone could be examined. On
calvaria, and slitting up the longitudinal sinus nothing
noticed. The dura mater was then incised and reflected so
the pia and arachnoid, but there was an absence of any infla
chief. The brain was then removed, and laid aside for a
examination. The osseous roof of each middle ear was
there was nothing on their cranial aspect suggesting any ne
On removing these, both middle ears were laid open, and
contain a quantity of thick, greenish-yellow pus, which on
had made its way into the mastoid cells. The ossicles in
somewhat rough, and appeared to be slightly necrosed.
indication of any septic phlebitis discovered. *Brain.*—On
brain in the ordinary method, the first incision through the
hemisphere disclosed the presence of two abscesses—one s
the junction of the anterior and middle thirds, and the othe
terior third. In the right cerebral hemisphere two absces
very similar situations were also found. The ventricl
ganglia seemed normal. The cerebellar hemispheres co
abscesses, but the middle lobe was not diseased. A sec
the pons showed an abscess situated in the tegmentum
therefore, exercise any injurious effects on the pyra
only by pressure, and possibly we have in it an expla

paresis of the lower limbs. It is, from the site of this abscess, difficult to understand how the motor nuclei of the fifth and sixth cranial nerves and the connection of the auditory with the superior olivary body could have escaped, but no indication of any implication of them was found during life, except possibly in the case of the latter, which may be to some degree responsible for his deafness. The abscesses, though varying in size from a very small pea to a hazel nut, had many features in common. They each contained similar greenish-yellow, thick pus, had soft and somewhat irregular edges, were encircled with a bright-red inflammatory ring, and showed no well-defined capsule. Sections presented, on microscopical examination, a cavity with an irregular, jagged border, which, owing to its infiltration with leucocytes, stained deeply. Some of the pus was stained and examined for micro-organisms, but with negative results. The much more delicate method, however, of ascertaining the presence of bacteria by inoculating a sterilised tube containing some nutrient medium met with more success. A minute quantity of pus was removed from one of the abscess cavities by means of a sterilised platinum needle, which was then drawn along the slanting surface of solidified agar, and after waiting for some weeks, keeping the tube at the ordinary room temperatnre, a yellow growth took place along the line of inoculation. This proved to be a micrococcus, but its exact nature has not yet been determined.

The methods of the formation of multiple abscesses of the brain are very interesting. Abscesses arising from local causes, of which injury and disease of the ear are the most potent factors, are almost invariably single. Of twenty-seven cases of abscess of the brain attributable to ear disease, collected by Gull and Sutton, there were only two in which more than one abscess was present; in one of these there were three abscesses in the cerebellum, and in the other, one in the cerebrum and one in the cerebellum.[a] Morbid processes in distant parts of the body from which septic matter finds its way into the circulation are responsible for a large proportion of the cases in which the abscesses are multiple. Of fourteen cases of general pyæmia in which the brain was involved, in eight the foci of suppuration were numerous, and were scattered through different parts of the cerebrum. Secondary suppuration in general pyæmia would appear to be seated much less frequently in the brain than in some other organs, for out of 234 cases of cerebral abscess collected by Gowers[b] there were only 9 cases of

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[a] Reynolds. System of Medicine. Vol. ii., art. "Abscess of the Brain."

[b] Gowers. Diseases of the Nervous System. Vol. ii., p. 442.

pyæmic origin. There is, finally, a curious grou
cerebral abscess secondary to suppuration elsewher
present none of the symptoms of pyæmia, and after
careful examination fails to disclose any metast
except those in the brain. The limitation of t
suppuration to the brain is very remarkable an
inexplicable. "These cases," writes Gowers, "are
rous than those in which there is general pyæmi
ten per cent. of all cases of cerebral abscess are of t
of 234 cases.[a] Fagge states that within a few yea
six cases of this kind occurred at Guy's hospital.[b]
of the first observers who directed attention to the
the majority of these cases, the primary suppuratio
with the lung. Of eleven cases collected by him i
lent deposits took place in the brain without the i
general pyæmia, in 7 the abscesses were multiple,
focus having been connected with tubercular p
pneumonia, simple bronchitis or bronchiectasis.

In the case under consideration at present, owing
sibility of obtaining a complete *post-mortem* exan
difficult to say with certainty of which of the two
an example. From the number of the abscesses (at
found), from their situation, scattered as they
different parts of the brain not having any dire
relationship with the ear disease or with each ot
similarity in character which they presented there
doubt that they were secondary to suppuration e
that the infection was conveyed by either the bl
lymphatics, most probably by the former. The onl
favour of general pyæmia is the effusion into the
the pain in the right shoulder. These are, however,
other theories, and against the general pyæmic hypo
the absence of cardiac phenomena, of rigors, profuse
and very high temperatures, of an enlarged and ten
jaundice and albuminuria. The weight of evidence
therefore, to point to this case as an example of the
multiple abscesses of the brain from a primary sou
ration without the intervention of general pyæmia.
of the double purulent otorrhœa, and the absence of

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[a] Gowers. Loc. cit.

[b] Fagge. Practice of Medicine.

pus of old standing in any other part of his body render it probable that the former was the source of infection.

In conclusion, I wish to express my sincere thanks to Professor Finny, President of the Royal College of Physicians of Ireland, under whose care the patient was admitted to hospital, for permission to report this case, and to Messrs. Kennan, Montague Griffin, and Wynne, for the illustrations of the specimens which they kindly made.

ART. XI.—*Case of Mediastinal Lympho-Sarcoma.*[a] By J. W. MOORE, M.D. Univ. Dubl., F.R.C.P.I.; Physician to the Meath Hospital.

THE differential diagnosis between an intra-thoracic tumour and a pulmonary consolidation or a pleural effusion must always be a matter of deepest interest to the physician, and of supreme moment to the patient. In the following case, certain elements presented themselves which rendered an accurate diagnosis more than ordinarily difficult. The case also illustrates the importance of making an examination after death in every case of fatal disease.

The patient had the advantage of advice from Mr. Daniel P. Coady, L.R.C.P. Edin., of Johnstown, county Kildare, before she came under my care at the Meath Hospital. It will be seen from the following extract of a letter from Mr. Coady that the nature of the case was more than suspected by him. He wrote to me:—"I could never make it out a case of phthisis, although it was often diagnosed as such. At last I began to think that my ears should be going wrong, so it was a great satisfaction to me to hear the result of the *post mortem.* I always suspected there should be some intra-thoracic tumour. The dulness was only in front; there was fulness in place of the usual sinking under the clavicle; the cutaneous veins were greatly distended; and there were some enlarged lymphatic glands in the subclavian and occipital triangles. The latter disappeared under iodide of potassium and iodide of iron."

CASE.—Kate K., aged twenty-five, single, from the county Kildare, was admitted to Ward 18 of the Meath Hospital, under my care, on Thursday, November 26, 1891. She had been in delicate health for the previous eleven or twelve months, a troublesome dry cough and shortness of breath

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[a] Read before the Pathological Section of the Royal Academy of Medicine in Ireland on Friday, January 22, 1892.

being the chief symptoms since August, 1891. By her frie
supposed to be in "consumption"—more particularly as sh
losing flesh for six months or so.

When I first saw her, on the morning of November 27,
great distress with her breathing, and sat bolt upright in bed
by no means extremely wasted, and the congested look abo
and eyes at once suggested that she was perhaps the subjec
pensated valvular disease of the heart. Physical examinatio
failed to elicit any evidence of cardiac disease. Her puls
respirations, 38; temperature, 99·8°. The external jugular
permanently full.

Examination of the chest soon showed that an exten
effusion existed on the right side. Thus, this side was full
left, the ribs at the base were rather widely separated, there
inaction of the side. On percussion, very complete dulness
all over the front of the right chest, except in the acromial a
the sound was comparatively clear but high-pitched. The du
gressed the middle line above to the extent of one and a half to
Posteriorly absolute dulness ruled all over the base, but in
scapular and supra-scapular regions the percussion note was
and breath sounds were audible. So far as I had gone in th
tion, I believed we had to deal with an extensive right pleur
but one thing puzzled me, and that was the slight displacem
the left which the heart seemed to have undergone. The ap
in the nipple line.

Notwithstanding this fact, I considered that the evidenc
effusion was convincing, and the patient's great distress led
thoracentesis. Accordingly, the same afternoon, Dr. Lenno
and drew off 10 ounces of ordinary sero-fibrinous fluid. Ne
the girl was able to lie down, which she had not done for
and expressed herself much relieved. On proceeding to
chest, I was greatly surprised to find that there was practicall
in the area of dulness over the right apex in front, and that
veins on both sides of the neck remained quite as full as th
before thoracentesis.

For a time the patient felt better, but distress and orthopno
increased, so that on December 19, 1891, thoracentesis was
formed. Only two or three ounces of sero-fibrinous fluid
off, the cannula apparently becoming plugged with a der
coagulated fibrin. The fluid had a specific gravity of 10
highly albuminous. The same evening her temperature
102·1°—the highest reached during the illness. There wa
change in the physical signs over the right apex. The inf
region now began to bulge manifestly, the superficial veins

and the skin looked puffy or œdematous, and pitted slightly on pressure. I thought that there must be either an encysted pleural effusion (probably an empyema) or an intra-thoracic tumour pressing on the innominate veins.

On December 26 the patient took a change for the worse, her temperature became subnormal, and she gradually sank and died on Tuesday, January 5, 1892. I saw her for the last time on New Year's Day. In my unavoidable absence Dr. Lennon kindly took charge of her, and after her death Dr. Craig made a careful, though partial, autopsy. To Dr. Craig I am indebted for the following note of the *post-mortem* appearances:—

Autopsy.—The thoracic cavity only was examined. On removing the skin over the sternum and costal cartilages, the subcutaneous tissue was found to be adherent and occupied by a new growth which had pushed its way through the pectoralis major and the intercostal muscle between the cartilages. On attempting to elevate the sternum, it was necessary to cut through a tumour which lay in the anterior mediastinum, and which was adherent to the bone. On the right side the pleural cavity was filled with fluid, the upper and lower lobes of the lung, but especially the latter, being compressed backwards and inwards against the spinal column so that no lung tissue was apparent. The fluid was straw-coloured and filled the pleura to the apex, while stretching across the cavity at intervals from above downwards were net-like partitions of elastic lymph which came away on the hand like cobwebs. The pleura was not thickened. On turning to the tumour which occupied the anterior mediastinum, it was found to be adherent to both lungs and growing far into the right one; it was also adherent to the pericardium, the inner surface of which was lined by the new growth. Nodules also lay between and were adherent to the pleura and pericardium. The growth extended up into the neck as far as the lower border of the larynx.

The pneumogastric nerve passed through the mass of the tumour, but was not flattened through pressure. The neoplasm, as is usual in such cases, grew round rather than into the nerve. Closely surrounding the trachea were many enormously enlarged glands, particularly on the right side. The œsophagus on the left was not in any way involved or compressed.

Dr. H. C. Earl, F.R.C.P.I., very kindly made a careful histological examination of the tumour, which was a typical hard lympho-sarcoma. He also favoured me with a beautiful stained section of the growth, which shows under the microscope numerous round cells and the stroma as well.

The new growth probably took its origin in the remains of the thymus gland.

Remarks.—It is to be regretted that circumstances more complete *post-mortem* examination. During life, there were no evidences of splenic or other visceral dise tainly there was no pericarditis. The way in which th grew round the trachea and pneumogastric nerve is not In his recent work on the "Pathology of Mediastinal Tu Dr. J. Lindsay Steven, of Glasgow, observes that pe most characteristic feature of mediastinal lympho-sarcom manner in which they mould themselves round the grea and vascular structures of the upper portion of the thorac It is, indeed, true that the veins suffer from the encroac the tumour much more severely than the arteries. D also points out that sarcomata of the mediastinum seem differently to aneurysm as regards their mode of invo nerves. Aneurysm pushes the nerve trunk aside, cru destroys it by pressure. Sarcoma, on the other hand, a surround it much in the same way as it does a bronch artery.

In my case, lastly, the singular freedom from infla shown by the involved pericardium is very noteworthy.

ACUTE YELLOW ATROPHY OF THE LIVER.

Burckhardt (*Correspond. Bl. für Schweizer Aertze*, Aug. 15, 189 the case of a widow, thirty-two years old, who, after profound depression, developed jaundice, followed in turn by delirium, slight elevation of temperature, death taking place in coma. Th confirmed the diagnosis of acute yellow atrophy of the liver hardt takes occasion to controvert the view that acute yellow always the result of phosphorus-poisoning. In the former th enlargement of the liver and the colicky pains of the latter are while the maniacal manifestations of acute atrophy are absen phorus-poisoning. Examination has thus far failed to find p in the organism in acute yellow atrophy. From the absence of and the sporadic appearance of, acute atrophy, Burckhardt is to place it in the category of infectious diseases. He wou ascribe the symptoms to the absorption of abnormal products in the course of parenchymatous inflammation of the liver indu unrecognised noxa.

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[a] The Pathology of Mediastinal Tumours, with special reference to Diag John Lindsay Steven, M.D., Assistant Physician and Pathologist, Glas Infirmary. London: H. K. Lewis. 1892. 8vo. Pp. 100.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Motherhood: a Book for Every Woman. By DR. ALICE KER, Hon. Medical Officer to the Wirral Hospital for Sick Children, and to the Birkenhead Lying-in Hospital. London: John Heywood. 1891. Pp. 128.

THE medical profession, we are sure, cannot fail to recognise the great want of a book brought out on such lines as this—a book comprising in popular form all the details necessary for every woman to know, in order that she may be enabled to secure her own health and that of her children, should she become a mother. Such a book, to be of practical value, should be written fully, yet simply, and its reasoning based on strictly sound physiological teaching. All appeals to morbid sentiment and scriptural references should be as scrupulously avoided as they are in the more abstruse works on medical subjects, unless, at all events, their truth is borne out by our present physiological knowledge. We quite agree with the writer of the preface as to the necessity for plainness of speech in these matters, but we cannot think that an apology for it is necessary when introducing such a book to the public. They are the best judges of its value, and cannot misunderstand it when put before them in such a serious light. Unfortunately, in the present work our ideal is far from being realised, for appeals to sentiment and scripture are unnecessarily frequent—sound physiological and medical teaching being on several occasions, apparently, in the mind of the writer of very secondary importance when compared with them.

The book, after an introduction, which contains nothing of practical value, opens with a chapter on "Commencing Womanhood," in which, besides other useful information, the author points out how often the habit of alcoholism originates in the practice of taking stimulants to allay pain during menstruation, and concludes by showing how pernicious is the custom of leaving without skilled

treatment young unmarried girls who are suffering f
clearly pointing to some lesion of the genital organs
endorse this opinion, for we fail to see any reason wh
ried woman should be treated differently from any
allowed to remain untreated for want of local thorough
We regret that this antiquated and unscientific pre
tunately pervades but too prominently even the mos
our English gynæcological text-books.

In the second chapter Matrimony is discussed, and
for parents or guardians to explain fully to every y
entering into matrimony the duties and relations
expected to undertake. In the matter of sexual in
quite agree with Dr. Ker that the wife should have pe
over her own person within legal limits; but we cann
her when she says that the choice of *time* and *fre*
right of the woman, as this would be giving her co
husband's person also. We certainly think with
abuse of this relation is but too frequent in married
same time we fear that the author does not recognis
the dangerous consequences that might result from
enforced by either party. While cordially uniting in
the use of artificial checks to conception, we would be
from the author what medical or physiological ground
stating that "there is not one of them which is not lia
the health of either husband or wife:" and further, "th
ineffectual in compassing the end for which they ar
and, in that case, the effect upon the child must be anyth
ficial." This latter statement is truly ludicrous.
of the fashionable marriage and the evils of the
are rightly censured. This chapter concludes by
to cases in which marriage is undesirable." Idiocy,
and intermarriage with relations, are each treated of
all forms of venereal disease are unfortunately quite i

The third chapter is devoted to pregnancy and misc
speaking of dress, such as should be worn during pr
author states, p. 35:—"If the breasts be prevented by
from expanding freely, they will be subject to the uns
and lines under the skin, which some writers descri
occurring during pregnancy." And again, in speaking
albicantes, p. 39: "The unsightly lines and the shriv
ance which childbearing generally leaves on the skin of

of the compressions of the skin between the clothing
ged womb, and they do not occur in women who have
oosely. They also depend, to some extent, upon tight
er delivery." We would be indeed pleased to hear
theories have been evolved, and what can be brought
pport of them by their ingenious originator. In the
scarriage the obsolete notions about the "*habit* of
are put prominently forward, while the most probable
rtion are given but slight notice, or are altogether

is the subject treated in the fourth chapter, which,
say, shows but too plainly a complete absence of
vith the fundamental principles of modern obstetrics.
s given a most exalted place, whereas direct infec-
nipulation of the genitals is not even hinted at.
re told that "the carpets should be taken up and
aten, the curtains well shaken, and all the woodwork
ome disinfectant, such as carbolic acid." Compare
with the directions on pp. 53 and 54: "It is of great
y hot fomentations, in the form of a sponge or cloth
water, as hot as can be borne, and kept constantly
e parts during all the rest of the time. The opening
red plentifully with vaseline, *washed lard, or some such*
Here no disinfection of the hands of the attendant
's external genitals is mentioned, though we are told
is the disinfection of the woodwork, &c., of the
se of *sponges, wet clothes*, and, to crown all, *washed*
uch oily substance, is advised. Truly we had hoped
cles as these had been long since banished altogether
obstetric practice. It is, indeed, lamentable to find
rantly transgressing the principle of asepsis in any
ation on midwifery. Again, we are first told that
of all" for the delivery is a "wire-wove one"—a
ntrary to any teaching we have hitherto received.
e authoress says: "Perhaps the most desirable bed,
well-filled hair mattress." Now we would be glad to
e reader is expected to choose—(*a*) the one which is
(*b*) the most desirable bed. We would have thought
st bed of all" would be "the most desirable bed"
g her readers against the evils of tight bandaging
Dr. Ker leans towards the popular error of believing

that women will not sacrifice their slimness of figu
admitted.

The next chapter—care of the infant—is a decided i
on the previous one; but we think that it is rather p
allow an infant to have its first outing the seventh day
Lactation is next discussed. The authoress here st
"The milk comes freely into the breasts about the
sometimes accompanied by a certain amount of dis
feverishness." Had Dr. Ker consulted some mode
obstetrics she would find that normal lactation sets
panied by fever, and that so-called milk-fever is due t
of septic trouble. We think it not unlikely that this
would be found less frequent were the authoress to joi
banishing the practice, which she now advocates, of a
fomentations, with a sponge, &c., and smearing the o
washed lard or some such oily substance. On p. 78 v
"cases have been reported in which children, suckled
after a fit of anger on the part of the mother, have
vulsions, from the poisonous effects of the outbreak o
We must admit that we are more than sceptical re
ætiology of the convulsions in these cases, for we can
it can be argued that they occurred *propter hoc* rathe
hoc. In treating the subject of weaning and handfeedi
points out the necessity of boiling the cow's milk used
infants in order to sterilise it, and advocates the em
the boat-shaped bottle. She describes the method o
Franklands' artificial human milk, while the more us
for preparing milk for infant feeding are given but litt
The necessity for detailed directions as to the amount an
of the meals seems to be quite ignored.

In the next chapter—on infancy and childhood—we
that "a vaccination shield is useful if the child has
over to the care of inexperienced nurses, but its disa
that when it becomes soiled it may poison the arm, and
instead of good." We fail to follow the logic of th
for surely, when it has such a disadvantage, it is no
child "has to be given over to the care of inexperien
that it ought to be used. We do not think so, and
its use is questionable under any circumstances—oth
chapter, as well as the following one, is good. Lastl
womanhood is discussed. This chapter is very unequa

ich as directions about diet, attention to cleanliness n from stimulants, being well and clearly laid down, to find it marred by such a statement as—"Actual womb is not likely to occur at this juncture unless esent before." The book closes with a not unneces- on as to the advantages of cleanliness during men- e have criticised numerous points in this work, but nse we think that many of them, were they to go efore the public, who are unable to judge in such hemselves, might lead to serious results. At the hope and think that when it has been thoroughly errors corrected, this little book will fill a gap where ded.

Iateria Medica, Pharmacy, and Therapeutics. includ- iological Action of Drugs, the special Therapeutics of cial and Practical Pharmacy, and Minute Directions ion Writing. By Sam'l. O. L. Potter, A.M., M.D., ond.) Third Edition. Revised. Philadelphia: P. on and Co. 1891. Pp. 767.

his portly volume suggests its encyclopædic nature, t the table of contents shows that far more is treated ie title would cover; and indeed many of the sections vantage be omitted from a work on Materia Medica, l Therapeutics. For example: "Tables of Differen- ," "Signs of Labour," "Diameters of the Fœtal ," and "Ethics, the Hippocratic Oath, &c.," must as padding.

ortions of the work are as follows:—I. Classification according to their actions. II. Materia medica, h Abrus (which does not seem to have fallen as use in America as over here) and ending with . Pharmacy and prescription writing, including ch subjects as "Constituents of Vegetable Drugs," Blanks," "Approximate or Domestic Measures." herapeutics of all Diseases, from Abdominal Plethora er (curiously enough, Epidemic Influenza is omitted rwise full list). Two hundred and ten pages are section; there are plenty of references and some V. An Appendix, containing all sorts of odds and ends, from a capital list of Latin terms to the treatm poisoning.

There is an immense amount of valuable information in th and everything is done by arrangement, type, cross referenc a most ingenious system of labelled thumb-holes in the ma make reference rapid. It is, however, a pity to omit all words, merely giving their phonetic equivalents in English The following, for example, have a somewhat strange Aphrohdeetay—Venus; Pfleggo—I burn; Deeouraysis— tion. It would not take up much room to let the real modestly repose in brackets as a corrective to its phoneti valent.

The Pathological Histology of Bronchial Affections, Pneumo Fibroid Pneumonia: An original Investigation. By A. G. M.D. London: Churchill. 1891. Pp. 207.

THIS work is divided into two parts. The first treats normal anatomy of the bronchi, acute and chronic br bronchiectasis, and of bronchial asthma. The second pa with the lungs, their normal anatomy, and the differen of pneumonia. In the account of the normal anatomy bronchi the author adopts the results of Waters, wh that the blood of both the pulmonary and bronchial ar returned in common by the pulmonary veins—the bronch carrying away only the blood from the structures at th the lung. He denies the statement of Klein that con tissue cells project into the epithelium, and holds that seen by Klein are merely growing epithelial cells. He h mucous corpuscles may originate from epithelial cells by and finds that the remarkable basement membrane of th bronchi is not really homogeneous, but contains nuclei, an posed of excessively fine longitudinally-disposed fibrils.

It would be impossible for us in the space at our di follow Dr. Auld through his description of the pat changes of the bronchi. While the investigation is, n painstaking and ingenious, it appears to us that it is m an over self-confidence, amounting often to bumptiousne great contempt for the work of other pathologists wh differ from him, and a want of distinction between demo

Thus we have the assertion that pus cells may
n epithelium, connective-tissue cells, and that even
ılar fibres proliferate, although whether pus cells
-tissue cells result from them is not quite clear.
ns we are called on to credit on the bare statement
without the support of drawings or other evidence.
often such statements have been made before, and
s to interpret microscopical appearances so as to
ccord with such views; but we know also that
experimental work show that such an origin of
y no means so common an event as was formerly
is true there are nine illustrations in the book, two
epeated; but they are of a rough semi-diagramatic
terly inadequate to establish any point in minute

ter on Broncho-Pneumonia the following "grand
etween acute broncho-pneumonia and acute lobar
aid down:—In both there is a fibrinous exudation.
se of acute broncho-pneumonia the fixed connective-
the alveolar walls invariably germinate, and give
crowd of young cells, which soon fill up the alveolar
such germination occurs in the vast majority of
ry pneumonia. When it does occur it is excep-
es rise to grave consequences."
chapters, on Fibroid Pneumonia, are interesting.
, in which the lung becomes indurated, without
on in size and without dilatation of the bronchi,
narily or as a sequel to acute lobar pneumonia. It
wth of fibrous tissue into the alveoli and an organi-
orinous exudation. These ingrowths are peduncu-
ılar in the early stages. Subsequently the vessels
reat degree obliterated, and necrotic changes may

as we have said, treats those who differ from him
respect. We read that Cohnheim is blindly
he views of Rindfleisch and Buhl are a pure tra-
hole subject of inflammation; Professor Hamilton
the extraordinary and preposterous theory; the
got into the habit of using the stupid word acute
monia—and so on.
wn use of words is sometimes original and peculiar.

Thus we meet with such terms as "sthenicity," "a
"demarcatable," "hecticity," &c.

Although we are far from agreeing with the writ
of his views, we must admit that his work shows e
labour and ability, and it will, no doubt, occupy a p
literature of the subject with which it deals.

Collected Contributions on Digestion and Diet. By Sir
Roberts, M.D., F.R.S.; formerly Physician to the M
Royal Infirmary, and Professor of Medicine in th
University. London: Smith, Elder & Co. 1891.

This book consists mainly of a reprint of two well-kn
of Sir W. Roberts—viz., the Lumleian Lectures "On
tive Ferments and Artificially Digested Food," and th
delivered at Owens College in 1885, "On Dietetics and D
To these have been added some other papers on kindre
published at various times.

In the present volume these lectures and papers are no
chronologically, but are classified according to their subj
book is divided into Four Sections, of which the first
Digestion. The digestive ferments and their action on t
classes of alimentary principles are discribed, and there
on the estimation of the activity of pancreatic ext
Section II. Dietetics are discussed, the effects of food-a
tea, alcohol, beef-tea, &c., on salivary, peptic, and
digestion are described with much minuteness and accu
the last chapter contains some very valuable practical hi
feeding of patients. Section III. treats of the feedi
sick, and of the use of artificially digested foods. Full d
given as to the mode of peptonising many articles of
Section IV. Sir W. Roberts sets forth his views on the
of Acid Dyspepsia by alkalies and by provoking a flow o

A good part of the contents of this volume has bee
reviewed in this journal. To this we need not now al
ticularly; there are, however, some papers which, up to th
have only been published in various journals. We would
call attention to the address "On some Practical
Dietetics," delivered in 1890 before the Manchester
Society; in it the author's breadth of view and sound
sense are eminently conspicuous. In the case of t

s of patients who are not very seriously ill, and who tend to their daily avocations, but who for some r ask their doctor what they ought to eat and to eing no very special indications for dietetic treat- Roberts calls attention to the eminently diverse tory directions given by medical men. On these or's remarks are excellent—"There is, I think, one in regard to the regulation of the diet in cases in re no special indications to fulfil, and that is to put to the patient when he inquires whether he may hat article of food—namely, Do you like it? and with you? If the answer be in the affirmative, elligible reason why the use of that article should oned. Such a rule is so plain and simple, and so onant with good sense, that it might scarcely appear r even dignified, to make formal mention of it, and ave done so had I not been satisfied from actual t it is constantly violated." The remarks, too, on ormation of national dietaries by a process of the fittest are well worth reading.

harm and clearness about all Sir W. Roberts writes a pleasure, as well as a profit, to read this volume. commend it to every one of our readers.

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pkins Hospital Reports. Vol. II. Nos. 7, 8, 9. *athology.*—1. *Amœbic Dysentery.* By WILLIAM T. N, M.D., and HENRI A. LAFLEUR, M.D. Balti-. Pp. 152.

ry is occasionally caused not by bacterial parasites, asion of minute animal organisms belonging to the has been known for some time, chiefly from the sch and Kartulis. Amœbæ have also been found others in cases of dysentery, and by Cunningham

ustive monograph before us the authors record the fifteen cases of dysentery caused by amœbæ, as em in Baltimore. Founded on the clinical history and on the *post mortem* appearances found in those terminated fatally, and from a most painstaking hole literature of dysentery, Drs. Councilman and

Lafleur give the most complete and exact ac remarkable disease which has yet appeared. Th trated by seven large folded plates, containing nu fully-executed drawings illustrating the pathologic with in the intestines, liver, and lungs.

The following are the conclusions at which the as a result of the work which has been done :—

" 1. Amœbic dysentery is a form of dysentery whic clinically and anatomically, should be regarded as a disti

" 2. We would consider that—

" (*a*). The amœba dysenteriæ has been shown to agent from its constant presence in the stools and in lesions, and from the inoculation experiments of Kartuli

" (*b*). Clinically the disease is characterised by the pre in the stools, which, in addition, present physical cha from those seen in the stools of other forms of dysentery, by a variable onset, course, and duration, of which the are periods of intermission alternating with exacerba marked tendency to chronicity, with the production of a degree of anæmia.

" (*c*). Anatomically the disease is characterised by t ulcers in the colon which generally differ from those fo form of dysentery. The ulceration is produced by in submucous tissue and necrosis of the overlying mucous ulcer, in consequence, having the undermined form. addition to the ulcers, there is infiltration of the submu out ulceration. In all of these lesions, unless complica of bacteria, there is absence of the products of purulent

" 3. Abscess of the liver with or without involveme is a frequent complication, much more so than in an dysentery. The involvement of the lung may early involvement, and be detected by the occurrence of amœb before there is evidence of liver abscess. These abscess anatomical features from those produced by other cau difference is found in the absence of purulent inflamma being caused by necrosis, softening and liquefaction of these liver abscesses the amœbæ are not associated organisms.

" 4. The disease is widely distributed, and is found i in Europe, in most parts of the United States, and in th where.

" 5. This is the form of dysentery which has been dysentery.'

PART III.

SPECIAL REPORTS.

RT ON PRACTICE OF MEDICINE.

BEWLEY, M.D., Univ. Dubl., F.R.C.P.I.; Assistant
ysician to the Adelaide Hospital, Dublin.

BROMOFORM IN WHOOPING COUGH.

reated 100 children with bromoform ($C\,H\,Br_3$).
was eight weeks old, and the oldest seven years.
ere cured, and the treatment consequently stopped
weeks. In a few cases the children were noticed
d sleepy during the treatment. In one case the
luced by the bromoform were more serious, the
into a very deep sleep or coma. It, however,
r receiving injections of ether.
mployed were as follows:—For children up to one
rops three times daily; between two and four years,
4 times a day; from four to eight years, 5 drops
day. In all 10–15 grams. (2½–4 drams.) were given
in none more than 20 grams. (5 drams.). Bromoform
parent fluid; it must be kept in the dark; other-
s red and thick.—*Berliner klin. Wochenschrift*, 1890,

ATH AFTER A SMALL DOSE OF SALOL.

ged thirty, was suffering from indigestion. In order
the motor power of the stomach Ewald's method
15 grains of salol were given. In a short time
came restless; then unconscious; pupils dilated;
ting; pulse irregular. The urine was dark-colou the
salicylic acid. She died 12 hours after takir After
ortem examination showed hæmorrhagic gastri d been
ealed gastric ulcer, and chronic endometritis between
need of care in using salol, and the necessit he Koch

sidering the general condition of the patient and the stat kidneys. If a patient to whom salol has been given sh unusual susceptibility to carbolic acid, sulphates should be given: sulphate of sodium is about the best.—F. Chl *Therap. Monatshft.*, 1891, p. 213.

A NEW METHOD OF ADMINISTERING SULPHONAL.

The patient is directed to dissolve the drug in about 6 of boiling water immediately before going to bed. The su dissolves fairly rapidly, especially if it be kept stirred. T patient cautiously adds cold water until the solution enough to drink; or else the solution can be let stand u cool enough. In either case the medicine is to be take as possible. The taste is somewhat bitter: to avoid thi spoonful of some flavouring syrup may be added.

If the drug is used in this way, sleep is said to come o at once, and to be more heavy and sounder than when it in the ordinary method. By next day there is no sleep other unpleasant after-effect.—D. D. Stewart, *Med. New* 1891.

FŒTID PLEURAL EFFUSIONS.

Dr. Alexander James divides these, from a pathologic of view, into three classes:—

(1.) Effusions, fœtid or stinking, because associated w resulting from, gangrene of the lung and superjacent The fact of an effusion belonging to this class is ofte by the discharge of a necrosed piece of lung-tissue, thro chest-wall opening after paracentesis.

(2.) Effusions which become fœtid as the result of th of air, or of putrid materials—*i.e.*, of putrefactive or Instances of this class are met with when a dirty as needle is introduced into an effusion, when an empyem through the chest-wall, or into a bronchial tube, when abscess or hydatid ruptures, or when a tubercular thorax occurs; in the last case, however, the effusion [illegible]nes fœtid, there probably being an antagonism e bacilli and putrefactive organisms. This antag y the fact that (*a*) tubercular cavities in the lun fœtid, while other cavities usually do; and (*b*), ular phthisis in which, after the formation of c

"4.
in Eu
where.
"5.
dysenter

d fœtid odour of breath show themselves, very
ration is sometimes noticed in the symptoms.
es of fœtid effusions belonging to this class are:
he pleural cavity of an œsophagus as the result of
ase, and ruptures into the pleural cavity from the

s which are fœtid, but in which by symptoms, by
amination, or by both combined, the existence on
f gangrene of the lung, and on the other of means
ir or putrid material, cannot with certainty be
In these cases Dr. James believes the putre-
ms to have been conveyed by the blood to the
re can," he says, "I think, be no doubt that
various tissues contain micro-organisms, some of
tive; but that, owing to the phagocytic action of
ues, their effects for harm are prevented. Given,
exhausting condition—as, for example, convales-
te disease, or chronic alcoholism—this phagocytic
ourse be lessened, and to this let an acute pleuritic
eradded, it is not unreasonable to believe that in
the inflamed tissue these germs may be able to
selves a nidus for their growth and development."
to treatment, Dr. James recommends free drainage
ning made in the 7th or 8th interspace, somewhere
osterior axillary and scapular lines. He advises
a rib should be resected in every case, and also—
not insist on this—that the pleural cavity should
gated with warm boracic lotion, or some similar
ng as fœtor continues.—*Edinburgh Med. Jour.*,

R OF TUBERCLE BACILLI PRESENT IN SPUTUM.

F. Nuttall, of Johns Hopkins' University, has
new method, the number of bacilli present in the
ents who were undergoing the Koch treatment.
e patient expectorated 2,000,000,000 bacilli during
efore the inoculations; after the inoculations the
between 3,000,000,000 and 4,000,000,000. After
ns ceased the number fell to what it had been
another case the number of bacilli varied between
d 165,000,000 on the days preceding the Koch

inoculations, rose irregularly to 283,000,000 after the f
tion, and fell to 265,000 by the time the sixteenth inoc
been reached. In other cases not undergoing the I
ment, the number of bacilli present was found to v
from day to day, in one case rising within a short
300,000,000 to over 4,000,000,000.—*Johns Hopkin*
Bulletin, quoted in *New York Med. Jour.*, June 20, 18

A CASE OF LANDRY'S PARALYSIS.

This disease is so rare, and at the same time so int
account of the obscurity of its pathology, that we re
history of a well-marked case, observed by Dr. Neglei
essen.—*Deutsche Medizinal-Zeitung*, June 25, 1891, p.

A fairly-strong and healthy man, aged fifty years, w
on May 9th with violent diarrhœa, passing 20–30 l
daily, and suffering from tenesmus. After severa
diarrhœa lessened, but on May 13th a doctor was sent
first time, on account of the patient's excessive weakn
ment—opium, tannin, and tincture of rhubarb; in
followed. On the morning of the 16th patient notic
were very weak. This weakness increased so rapidly
following day he could hardly raise them, on the 18tl
totally paralysed—the backs of the hands slightly
On the 17th weakness of the legs commenced, and nex
had increased so rapidly that the only motion patie
to make with his legs was a slight movement of one
of his right foot. On the same day the muscles
became paralysed, and gradually swallowing grew mo
difficult, so that after each solid morsel patient was obli
a drink. On the 19th he had to be fed with a tub
condition good; appetite good; no pain or tenderness
mind perfectly clear. On May 20th strength failed c
and on the afternoon of the 21st death occurred su
was not caused by paralysis of the diaphragm, or b
of choking; consciousness perfect to the end.

There was no alteration whatever in the sensibility
Abdominal reflex absent; cremasteric reflex badly ma
reflexes absent. Bladder and rectum acted normally;
siderably swollen. Temperature normal till the last d
rose to 102·6° F. Urine deposited abundant sediment
autopsy was not permitted.

of the disease resembled that of an illness produced
on. Neglein suggests that possibly poisonous sub-
ains) may have caused the diarrhœa, and subse-
absorbed, may have fatally affected the spinal cord.

UTE ASCENDING (LANDRY'S) PARALYSIS.

f New York, records another case of this disease.
orty-five, had suffered occasionally from pains and
s legs, following an injury to his back in 1886.
90—some weakness in legs. April 15th—complete
gs; some weakness of arms. April 18th—slight
y, diplopia, and right ptosis; could not grasp at all
d, and but very feebly with left. Reflexes, super-
absent; bladder and rectum inactive. No muscular
nsation perfect; muscles reacted well to faradic
il 23rd—became deaf, then blind, and a quarter of
comatose. Died soon after of respiratory failure.
pinal cord at the autopsy seemed healthy. A very
oscopical examination showed a slight cerebral and
tis, an infiltration of the walls of some of the veins,
tion or neuritis of some of the anterior roots of the
the nervous system was, in other respects, normal.
investigation gave negative results. In short, no
use was found for the symptoms during life.
t agree with the attempt that has been made to
y's paralysis with multiple neuritis. In the cases
heral neuritis has been found after death, bulbar
been absent, or only slightly developed during life,
been a decided disturbance of sensation, a paralysis
ers, or the reaction of degeneration in the muscles,
ss on pressure—symptoms which form no part of
ysis. He looks on the disease as a clinical entity,
orresponding lesion has been found. The change is
ical than of an anatomical character. The tendency
t as a ptomaïn poisoning.—*New York Med. Jour.*,
and *Med. Chronicle*, July, 1891.

HOD OF ASCERTAINING THE SIZE OF THE LIVER.

ties in many cases of finding out exactly where the
the liver is are known to all. Tenderness in the
liver, ascites, and tympanitic distension of the

abdomen, all render physical examination uncertain in th
it affords. Dr. C. Verstraeten, Ghent, has without any
obtained accurate results by the following methods:—W
patient sits up, or, still better, lies down, with the al
muscles relaxed, he listens with a stethoscope to the hear
He applies the stethoscope first to the apex of the heart,
examines with it the patient's right side, applying the ste
in the sternal, mammary, and mid-axillary lines, and gradu
ceeding downwards. As far as the liver extends the hear
are well heard, and do not grow much weaker. Imm
however, when the stethoscope passes beyond the lower
the liver the sounds are no longer heard. In this way
of the liver downwards can be determined exactly.

The apex of the heart is situated close to the left lob
liver, and the structure of this organ is homogene
conducts sound well. It would be quite possible to ascer
upper limit of the liver by this method; but Verstrae
that auscultation and percussion of the lungs give cleare
When the heart-sounds are exceedingly weak this m
not available. During the examination the abdominal
must be relaxed; if they are rigid the sound is conducte
contracted muscles, and the loss of sound which oug
found at the edge of the liver does not occur.

Verstraeten has not had an opportunity of experiment
this method in cases of large cancerous tumours and abs
the liver, and cannot definitely say if the heart-sounds a
well in these cases.—*Centralblatt f. klin. Medicin*, 1891, p

THE TREATMENT OF DYSENTERY BY MEANS OF COR SUBLIMATE ENEMATA.

In the military hospital in Oran there were 200 cases
dysentery, 53 of which were treated in the following ma
2 or 3 injections were given daily of a warm solution of
sublimate, strength 1 in 5,000; the injections were not
more than ten minutes. If the patient was suffering fro
mild form of the disease, his stools being normal, except
presence of a little mucus and some streaks of blood,
enema was given daily. In cases of acute dysentery the
became much less numerous after the first day of treatm
generally the mucus in the stools disappeared after 3 or
tenesmus and pain diminished rapidly. If the anus

l tender, it was painted with cocaïn before the enema If there were exceedingly severe pains (colic) some was at first added to the enema. The diarrhœa in ceased so completely that purgatives became necessary. owed any salivation or other sign of mercurial poison- emoine. *Bullet. Général de Thérap.*, 1890, and *Cbt. f.* 1891, No. 11.

THE PATHOLOGY OF LEAD PARALYSIS.

t yet been satisfactorily decided whether lead paralysis y an affection of the central nervous system or of the nerves. Most cases in which have been carefully ave been of old standing, and complicated by secondary

t believes that in all cases the primary lesion is in the l muscles, and that if the case lasts long enough hanges may occur in the spinal cord. It is, however, he t impossible to decide whether the nerves are affected ne muscles subsequently, or *vice versâ*; or whether both are simultaneously attacked by the poison.

cent case of drop-wrist he found œdema and swelling of nic arachnitis of brain and cord, and adhesions of the and pia. The only nerves diseased were the musculo- these the sheath of Schwann contained a large number with the exception of these they were in some places others there were broken-up fragments of myelin and nders. There was considerable thickening of the blood- the nerve-trunks. The spinal cord and brain, when nicroscopically, appeared normal.—*Virchow's Archiv.*, *ft.* 2, and *Cbt. f. klin. Med.*, No. 25, 1891.

NAPHTHALINE AS A VERMIFUGE.

vitch of Biélsk considers naphthaline to be the best expelling tape-worms. Its action is certain, and there r of its producing any poisonous effects, seeing that it sorbed to any appreciable extent by the gastro-intestinal mbrane. The dose for adults is 15 grains, given when h is empty, and followed by a large dose of castor oil. ay take from 4 to 8 grains. For two days before the en the patient is to eat freely of salted, acid, and s. In all Dr. Mirovitch's cases one dose succeeded in expelling the tape-worm, head included, even in cases other drugs had failed.

He also found the drug useful in the treatment of asc *Mercrédi Médical*, May 20, 1891, and *New York Med. Jo* 15, 1891.

ON THE INFLUENCE OF ALCOHOL ON STOMACH DIGE

R. Wolffhardt carried out, under Pentzoldt's and F directions, a number of experiments on men, with the results :—

1. Absolute alcohol delays the digestion of meat and food, lengthening the process by about 30–40 minutes.

2. 2 ozs. of brandy containing 50 per cent. alcohol the digestion of starches, but on the contrary hastened meat if taken at the time of eating; if, however, the br drunk while digestion was going on, the effect was to pro process.

3. 3 ozs. of brandy taken in 3 doses of 1 oz. each durin tion, prolong that process by about 40–50 minutes.

4. 1 to 1½ ozs. of brandy shortens the process of dig 30–35 minutes.

5. Both red or white wines, whether taken before, o meal, help digestion.—*Münsch med. Wochenschrift*, 1890,

CUTANEOUS TUBERCULOSIS BY DIRECT INOCULATI

An interesting case showing the virulence of phthisica is recorded by Dubreuilh and Auché. A healthy serv twenty-three years old, was engaged in September, attend a consumptive lady, and to wash her clothes. had abundant sputum which she deposited in her hand She died on October 26th. Two days after the servant a painful red swelling on the left hand. Soon the axilla suppurated, and a number of tubercular swellings develop the right shoulder. A right-sided pleurisy also develop some time. In April, 1889, all the diseased spots were and cauterised, and healed with the exception of a sin axilla. In the end of 1889 the girl seemed well, except sinus, and for some doubtful signs in the lungs.

The fragments removed were examined, and the tu nature of the disease clearly established.

This case adds one to the already numerous warnings hed to look on phthisical sputum as a highly dangerous -*Archiv de Méd. Expérim*, 1890, No. 5.

THE TREATMENT OF DIABETIC COMA.

itz (Neuenahr) contributes to the *Berliner klin. ift*, 1890, No. 40, a paper on this subject. The ic signs of this condition are sleepiness, increasing accompanied by violent colic and high temperature. es not believe that this state is due to "Acetonæmia," at it is due to intoxication by the products of intestinal on. He gives strong purgatives; under their influence lack stinking matter is passed. In four cases this esulted in recovery.

ON EMPHYSEMA OF THE LUNGS.

pers on this subject Liebermeister first refers to the the origin of this affection; there are three theories, h are mechanical in nature (the inspiratory and the and the third attributes the lesion to histological the lungs. Liebermeister believes all three views to these various causes act in different cases either singly ation. The mechanical theories explain sufficiently on of the alveoli; but they do not explain the of this condition. On the other hand, the histo-ry alone is insufficient; it requires as well a mechanical h is supplied by the "dry catarrh" and its results. ition to emphysema may be hereditary, and possibly in deficient development of the elastic tissue in the h regard to the physical signs of this condition, er calls attention to the fact that the dryness and want in the lung, acting in conjunction with the lessened he thoracic walls, may cause a shortening and weakenercussion-note. This weakening of the note may be s to give rise to a suspicion that there is some infiltrapex.—*Deutsche med. Wochenschrift*, 1891, Nos. 1 and 2.

HE TREATMENT OF PLEURAL EFFUSIONS.

s effusions Lewaschew has adopted the following reatment:—He removes with an aspirator a considerty of the pleural fluid, then injects into the pleural ual or somewhat smaller amount of sterilised Na Cl

solution of 0·7 per cent. strength; then he again aspir
the patient complains of some pain in the chest. Th
of injection and aspiration is repeated several times. T
ment was employed even in cases in which there was co
fever, and in which the effusion was increasing in the
every case the result was a complete cure. The fever
gradually, and the remainder of the diluted effusion is
after some time, and never reaccumulated. In this
pleural effusions are cured by one single operation.—
med. Wochenschrift, 1890, No. 52.

THE TREATMENT OF INFANTILE CHOLERA.

Rheiner considers this disease to be due to some infecti
and does not believe it to be simply caused by some digesti
ance. He holds that the severe and rapid collapse, and the
loss of fluid by the tissues—phenomena much greater
be accounted for by the loss of fluid from the bowel—
a poisoning by ptomaïns and noxious substances belong
aromatic class of bodies; these substances are largely
the intestines, and absorbed thence. Up to the pr
treatment of this disease has been unsuccessful, stimu
astringents being quite unable to check the diarrhœa.
two measures which Rheiner believes useful. In the
the process of washing out the stomach, which already
practised in several hospitals; and secondly, the injectio
quantities of water into the bowel. This treatment,
warmly recommended by Baginsky, has been too much o
It causes very abundant evacuations of septic and poiso
matter, and also the water is absorbed from the bowel, an
the great loss of fluid which has taken place, by th
the collapse, and weakness of the heart are relieved.
carries out the treatment in the following way:—A well-
sized catheter is connected with an irrigator, the irrigat
with warm water, or solution of benzoate of sodium (5 p
or of creasote (30 drops to the pint of water), the catheter
introduced into the bowel to a distance at first of at least
as the irrigation goes on it can often be introduced to a
of 6 inches. The irrigator is at first raised but little, then
it is raised higher; the total amount of fluid used should
7 to 9 oz. While the fluid is going in, there are generall
large evacuations of fæces; after these the irrigation is

omes away clear. Then some more fluid is intro-
ie bowel, the catheter is removed, and the fluid is
ving away by pressure with the fingers on the anus
sure of the fluid has passed away. These irrigations
it once or twice a day for several days. Rheiner
his treatment has saved the lives of several children.—
tsheft, Jan. 1891.

W METHODS OF CHECKING HÆMORRHAGE.

om the fact that lime salts exert a considerable
he coagulation of the blood, Dr. A. E. Wright in a
d practical paper proposes to employ these salts in
ds as styptics. For checking external hæmorrhage
in-ferment solution to which 1 per cent. of $Ca\ Cl_2$
ed. This solution is prepared in the following
ood of herbivora, preferably cattle, is received from
o three times its volume of water, and after a few
tirred with sticks or wires, and the fibrin collected
is fibrin is washed in cold water for 10 minutes, and
ated with water for 24 hours, by which process a
rin-ferment is obtained. To this 1 per cent. of
d. There are several important details given, for
st refer to the original paper. Dr. Wright finds
ew drops of this styptic are added to a test-tube of
blood, it causes it to clot much more rapidly and
otherwise would. In a rabbit he found it possible
of the styptic to cut across both common jugulars,
eins, one lobe of the liver, and a number of mesen-
vithout causing the animal's death by hæmorrhage.
ents are mentioned.

part of Dr. Wright's paper deals with the possibility
he coagulability of the blood within the vessels by
dministration of calcium chloride. He finds that if
his salt be injected into the veins of an animal, and
ixed with the blood, some of the latter be withdrawn,
ore rapidly and firmly than if the $Ca\ Cl_2$ had not
ered; and if a wound is inflicted on animals
thus treated, the blood clots as it escapes from the
rms a tough adherent sheeting of blood which covers
d quite stops the hæmorrhage. He therefore sug-
ium chloride should be given whenever it is desirable

to increase the coagulability of the blood—*i.e.*, in an hæmorrhage, placenta prævia, hæmophilia, post-partur rhage, &c. If the dosage he employed with dogs wi bad effect were transferred to man, the dose in acute hæ would be about ½ oz. of Ca Cl_2 dissolved in a pint of adds smaller doses would probably suffice.

The Ca Cl_2 is rapidly excreted by the kidneys, so tha would have to be given repeatedly.

[Dr. Wright's paper is well worth reading. If hi comes up to his expectations it will be a most importan in the treatment of internal hæmorrhage. At any ra deserves a careful trial.]—*Brit. Med. Jour.*, Dec. 19, 18

A NEW FORM OF EPIDEMIC SKIN DISEASE.

Dr. Savill read before the Medical Society of Lo November 30, 1891, a paper on this subject. A larg of photographs and coloured drawings of the various the disease were shown, together with charts and tab symptoms. Several patients also were exhibited, with the in various stages still upon them. After narrating th of a typical case, the author went on to describe the ep it had occurred in two adjacent buildings—the old sick the Paddington Workhouse and the new Infirmary. O patients who were either in these buildings on July 1st, o subsequently between that date and October 31st, 163 attacked by the disease—89 males and 74 females—bei 20 per cent. Only two cases had occurred amongst th the author himself and a housemaid. All the cases bore resemblance to each other, but exhibited considerable va detail.

The disease may be described as a universal dermati times attended by the formation of vesicles, and always in the desquamation or exfoliation of the epidermis, atte certain amount of constitutional disturbance, and runnin or less definite course of seven or eight weeks. The s commenced sometimes as a papular or papulo-erythemat sometimes as raised maculæ, and in some rare cases as r however it begins the various elements become confluen three to eight days, and produce a crimson, irregularly surface, which is continually shedding its cuticle in flake of various size, from impalpable powder to the entire

If exudation were present, this entangled the flakes
nd formed crusts. A large proportion of the cases
by a serous exudation from the formation of vesicles,
sily broken. By this feature Dr. Savill divides his
groups—the "moist" type to the number of 100,
' type, of which there were 45; 18 being of a mixed
independent areas would be involved at different
all ran the same course. This condition of things
eks, several layers of cuticle being shed. By degrees
on subsided, leaving the skin considerably thickened,
wrinkled. In many cases the new skin presented
ent-like appearance, smooth and shiny, and some-

most frequently started in the upper-arm or fore-
), but almost as frequently on the face or scalp
cases on the feet and legs, 22 cases on the hands,
back, 12 on the neck, and a like number on the
en.

in most cases spread by contiguity to the neigh-
and in quite half of the cases the whole surface of
limbs was involved. The disease began and ended
; in some cases it was preceded by lassitude and loss
l not unfrequently the eruption would make a false
escence was tardy, and 38 of the patients had one or
Considerable irritation of the skin, and a feeling
d itching, were always present throughout the

titutional symptoms anorexia and prostration were
e feeling of lassitude and weakness were present in
were often profound, and in some the asthenia was
mperature remained normal, or even sub-normal,
n a large extent of skin was involved, and the
as at its height. The tongue was at first coated,
its epithelium. In something like a quarter of the
, or diarrhœa, or both, were present. The con-
inflamed in all the severe cases, and those where the
lved. The other epidermal structures—hair and
n the disease in its later stages, and were shed.
nt. of the cases in which the urine was examined
ound, though permanent damage to the kidneys was
y as the result of the disease.

The mode of termination in fatal cases was sometimes by consequent on the vomiting and diarrhœa, or more gen the extreme weakness produced by the eruption. So comatose as in uræmia. Dr. Savill connects two sympto fatal issue—muscular twitching, and embarrassed respiratio physical signs in the lungs.

Several of the cases were complicated with boils or c scattered about the body; and in some the skin remained p for long after the eruption had subsided.

The affection has to be diagnosed in the first place from e especially when it attacks parts containing loose cellul This is effected by its gradual advent, the absence of py some cases by the presence of vesicles, sometimes by the of a raised margin, and sometimes by the wide extent of Those cases which commenced as maculæ bear some res to German measles; but the absence of pyrexia, and the desquamation are sufficient to distinguish them. The variety of cases bore a striking resemblance to pityrias but they differed in the fact of their being epidemic, and in being almost exempt. Moreover, since we must concl Dr. Savill's cases were all one disease, and the "mois which were in the majority, so widely differed from rubra, we must also conclude that the other cases did n to this disease. On the whole the disease bears more res to acute general eczema than any other known disease differs considerably from this disease in the extent and se the dermal inflammation and thickening, the profusene exfoliation, and in the definiteness of its course.

The only treatment which availed was the external appl germicides, and the administration of stimulants.

The author then proceeds to consider the question of Age was certainly a very important predisposing cond although the Infirmary contained a relatively large nu aged persons, still it was shown that if the inmates wer according to age into decades, the percentage of those att the earlier decades was considerably smaller than the p in the later decades.

Thus, of those between 10 and 20, 6 per cen
" " 20 " 30, 7 "
" " 30 " 40, 6 "
" " 40 " 50, 17 "

Of those between 50 and 60, 24 per cent.
„ „ 60 „ 70, 38 „
„ „ 70 „ 80, 35 „
„ „ 80 „ 90, 24 „

med more prone to take the disease than females in on of 24 to 16 per cent. After discussing and excluding abies, and water as possible exciting causes, the question influences, such as climate and season, and contagion d to.

al phenomena of the disease are alone almost sufficient as contagious; its more or less definite source, the al disturbance, the marked effect of germicides, the anner in which the outbreak had come and gone, and t 6 out of the 11, who were the only ones out of 202 ons to contract the disease, were "helpers" tending on m the disease. Nevertheless, the contagion is evidently order, and seems to require several important predis- itions, especially including old age and sickness, or n," for its development. The bacteriology and several connected with this strange outbreak required careful n, and would form the basis of a future communica- *et*, Jan. 2, 1892.

ANDROLOGY.

s of American Physicians and Surgeons has established a ndrology, thus specialising the genito-urinary diseases of the he *Journal of the American Medical Association* hails the irst step in the right direction." The American Androlo- tion is now an integral part of the Congress, and andrology ith gynæcology, ophthalmology, dermatology, and all other ogies. Our contemporary takes a gloomy view of past treat- ions peculiar to the male. They "have been more neglected, erstood, and more frequently treated, 'for what there is in n a desire to benefit the patient, than was ever true of the omen. We believe that to-day fully as barbarous, slip- honest work is being done in this class of affections as was bserved in gynic disease." And again: "Andrology will the position it deserves until the average doctor ceases to competent to treat the most complicated case of genito- se—as long as the patient's money lasts." In future men's y apparatus will be better looked after—at least in the s.

PART IV.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intellige

ROYAL ACADEMY OF MEDICINE IN IRE

President—**George H. Kidd**, M.D., F.R.C.

General Secretary—**W. Thomson**, F.R.C.S.

SECTION OF PATHOLOGY.

President—**C. J. Nixon**, M.D.

Sectional Secretary—**J. B. Story**, F.R.C.S.I.

Friday, January 22, 1892.

Dr. J. W. Moore in the Chair.

Exhibits.

Dr. James Little showed the intestines from a girl, aged
who had died on the twelfth day of typhoid fever, her ill
been characterised by continuously high temperature, deliriu
distension of the abdomen. The Peyer's patches showed
teristically the stage of swelling and elevation, and the sol
were also swollen and the mesenteric glands greatly enlarged
bited also the intestines taken from a girl, aged eighteen, w
on the fifty-second day of enteric fever. Her symptoms had
tion of the abdomen up to the thirty-fifth day, with obstinate
After the thirty-fifth day the abdomen became distended and
the *post mortem* showed that the changes were chiefly in the
tine, the solitary glands of which were extensively ulcerated.
glands of the lower end of the ileum were also the seats of ul
in one a perforation had occurred; and although the apertu
stopped with fæces, and extravasation had not taken place,
with a considerable purulent effusion in the right ileo-cæcal
present.

Dr. O'Carroll presented specimens from a case of ente
which perforation of the intestine occurred on the thirty-si

ng till the fifty-ninth day. The intestines in the hypo- lvic regions were found matted together by peritonitis, ion was found in the ileum leading into an abscess cavity purulent material. All the intestinal ulcers, except that foration occurred, were healed. No ulceration of Peyer's e recognised.

ods of Isolating Typhoid Bacilli out of Bacterial Mixtures.

EY read a paper dealing with modern methods of isolating out of bacterial mixtures, and showed some plate and llustrative of Uffelmann's procedure. He said that one iculties met with in the investigation of water and food- to contain typhoid bacilli was that there were usually nuch larger number of putrefactive germs of all kinds, re intensely saprophytic than the typhoid organism, grew y substrata much more luxuriantly, and, producing rapid he gelatine, spoilt the plates before the sought-for germs develop into visible colonies. This difficulty was espe- vercome when diagnostic cultivation from fæces had to idering how great was the interest attaching at the the subject, owing to the aspersions cast on the Dublin he thought it well to lay before the Academy a short arious methods that had been proposed with a view to id cultures under such circumstances.

roposed to suck up with sterilised pipettes or filter paper he liquefying colonies, and substitute sublimate solution. method, for the manipulations involved great exposure l consequent risk of contamination.

er procedure was to make the sowings on gelatine or ad been added some substance antagonistic to the growth rganisms, but favourable to, or at any rate not inhibitory f the typhoid germs.

and Widal (*Annales de Phys. Norm. et Pathol.*, 1887, No. 2) er cent. of phenol, when added to the gelatine, prevented sms from developing, but permitted of the growth of the th. Thoinot's modification of this procedure, and Holz's d objections (*Ztschr. f. Hyg.*, viii., 143) were next dealt Weeney then described Noeggerath's method by coloured ta, and Gasser's modification (*La Sém. Médicale*, 1890, ally Uffelmann's method (*Ber. klin. Woch.*, Aug., 1891) e substratum with citric acid and colouring it with methyl e into. Dr. M'Weeney had employed Uffelmann's method tinctly useful, though in one of his cases a bacillus was es), which grew most abundantly in the medium, but

proved, in inoculation on potatoes, not to be the true typhoid
He always used parallel cultures of the genuine typhoid baci
diagnostic research. Based on somewhat different principles
sionally useful, were Kitasato's negative indol reaction, and P
litmus method. Lastly, allusion was made to the various a
ascertain the precise degree of reliability to be attached to
culture as a means of diagnosticating typhoid from other bacil

Dr. M. A. **Boyd** expressed himself very interested in Dr. M
communication, and it seemed to him that some practical deduc
be drawn from it. First, that the typhoid bacillus is an e
hardy one, and does not yield so readily to antiseptics as do
phytic and pyogenic bacteria that are such constant accompa
it in the alimentary canal. Secondly, that it seems to grow i
acid medium, though in the intestinal canal its culture
surroundings are strongly alkaline. To destroy it in the ailme
by an antiseptic would then seem to be not a very easy ma
would seem to require a strong one to effect this object.

Aortic Stenosis.

Dr. **Little** showed the heart and aorta of a patient, aged
who had died of cardiac dropsy, and who had, during life, a ve
diastolic murmur limited to the right second costal cart
exophthalmos. After death the left ventricle was found hy
and the aortic valves incompetent, and there were signs of
endocarditis on one cusp of the aortic valve and on the adjoi
cusp; but in addition to these changes which were anticipated
found a narrowing of the aorta, and in and beyond the origin
cardiac artery the narrowing was so close that only a No. 8 cat
be passed, and beyond the narrowed spot, which Dr. Little
congenital, there existed on the lining membrane of the vess
ficial ulceration similar to that which existed in the aortic
valves.

Dr. H. T. **Bewley** remarked that these cases of narrowing
of the aorta, though rare, were not unknown. They almost
existed t one spot, viz.—just beyond the origin of the left
artery, and near the spot where the ductus arteriosus joined
The reason of this fact was, that during fœtal life the bloo
the head and neck does not flow in the aorta further than th
clavian; the blood for the body and lower extremities flow
the ductus arteriosus, and between the subclavian and ductus
blood flows. It was at this spot that the narrowing occurred. T
the narrowing was not well known, possibly it was due to som
inflammation. He could not understand how any such narro
occur after birth when the aorta is full of blood under such hig

suggested that the ulcerated patch at the distal side of the probably not due to the mechanical action of the blood, but sion of the malignant endocarditis which was seen on the fective process commencing on a site previously unhealthy ritis, evidences of which were apparent in other parts of the

Multiple Abscesses of the Brain.

NS read a paper on the above subject. [It will be found at

Mediastinal Lympho-Sarcoma.

MOORE read a paper on the above subject. [It will be e 199.]

SECTION OF SURGERY.

I. G. CROLY, President of the Royal College of Surgeons in Ireland.

Sectional Secretary—R. L. SWAN, F.R.C.S.I.

Friday, January 29, 1892.

The PRESIDENT in the Chair.

Aneurysm of the External Iliac Artery.

asked for some details of a case of aneurysm of the external which had been treated medically by Mr. Thornley Stoker, hibited, and the subject of which was exhibited by Mr. out any trace of the disease.

ER, in reply, stated that the man presented the usual well- ptoms of an iliac aneurysm. The gravity of the operation of the common iliac made him hesitate to perform it. The s a combination of Valsalva's and Tufnell's methods, with ourable result.

Ballooning of the Rectum.

LTON read his paper on ballooning of the rectum—a term Bryant to denote the condition. Mr. Hamilton drew atten- ollowing extract from a course of lectures delivered by him Hospital in 1883, and published in the *Dublin Journal of ice* for that year:—"I have occasionally met with a peculiar the rectum in the living subject, in which all rugosity of the g appeared completely obliterated. The finger, when passed through the anus, seemed to enter a large globular cavity vacant, with walls absolutely smooth. The first impression w if the bowel was greatly distended with gas, but none passes finger or escapes after its removal. I have not been able to co state of the bowel with any special morbid condition. I latel an example of it in No. 6 ward in a case of severe melæna, i digital examination became necessary for the purpose of diagno asked the assistance of the members of the Academy in determ diagnostic significance of this remarkable phenomenon, and co stating:—"My own experiènce and observation would form following propositions: Ballooning occurs in many cases witl ture; stricture occurs in many cases without ballooning."

Dr. Ball discussed the question of dilated rectum, and exp opinion that, as a temporary condition, it was common, an diagnostic significance. When, however, it assumed a permanent it was probably often associated with diseases of the rectum, easy to understand how such a disease as malignant stricture pressure on the nerves) lead to a more or less marked paresis.

Sir William Stokes expressed satisfaction at Prof. Hamil established his priority in having observed the condition of of the rectum. He thought that it would hardly be looked diagnostic sign of much value in determining the existence of as he had observed it in other morbid conditions of the rec William Stokes mentioned some cases of malignant ulcers of on which he had operated, and in which this condition of ballo well marked. He thought therefore the diagnostic value of the in any special condition of the rectum was questionable.

Mr. Wheeler said that he had a gentleman now under formerly a patient of the late Mr. Tufnell; he is suffering fro of the rectum, and has this condition now called "ballooning." gratulated Mr. Hamilton on the interesting communication he ha before the Society.

Mr. W. Stoker mentioned a case of spinal concussion in symptom was markedly present.

The President said that he was familiar for many years condition of the bowel now known as ballooning, but that con not lead to a diagnosis of rectal disease: in ulcer of the r gases cannot escape, and that will account for the distensio cases. The President said the name ballooning was comparat but the condition was one he had long been familiar with. T such a condition occurring in spinal cases shows it is not of in diagnosis of rectal trouble.

Mr. Hamilton, in reply, said:—I have to thank the memb Section for the kind consideration which they have given to

that ballooning is the result of deficient nerve force below
eld by many, but I do not think it gives a satisfactory
he phenomenon. The President does not seem to attach
alue to ballooning, and yet the opinion of a sound prac-
ke Mr. Bryant must have weight with a great many. I
hear the President say that his operations for ulcers and
ved by painful distension of the rectum, with flatus. My
ite the contrary. I find, since the perfect dilatation and
e sphincter has been adopted as a preliminary to such
is a trouble of the past. The ballooning which Mr.
ave described has characters more decided than a mere
on with flatus.

pilepsy, Aphasia, and Paralysis of six years' duration, treated by Trephining; Recovery.

N read a paper on an interesting case of trephining in
asia, the result of injury. An excellent recovery followed

, aged thirty, a discharged soldier, was thrown by a horse
ince, and dragged along the ground for some distance; was
nconscious condition to the Meath Hospital, remained in
for a fortnight, and was subsequently retained in the
r months. He was for a further period of five months
Hospital at Portobello Barracks, when he was discharged
e owing to a hesitancy in his speech and continual head-
a fortnight of leaving the Service he commenced to have
vulsions at irregular intervals, frequently obtaining three
ther times no attack would occur for a month. Could
n an attack was about to occur by bright flashes before
feeling as if his head was being shoved downwards, or

resented a heavy, dull cast of countenance, with a lifeless
he eyes, as if his mental power was deficient. When
able to answer except in monosyllables, or with a con-
al between the words, which are peculiarly clipped,
dently understands all said to him. Tremors exist in his
arm, and the left side of his face twitches frequently.
l loss of muscular power in his left hand and arm, although
impaired. Dr. Swanzy examined his eyes, which were
n all particulars. A triangular scar of the scalp existed
ipital region, above which is to be felt a well-marked
sion of the skull, about ½ inch in diameter; this corre-
tion to the second annectent convolution of the brain.
4th, 1891, the skull was trephined at seat of injury with

a ⅝-inch trephine, when the bone was found to be of great th
density, there being an absence of the diploe. The inner s
sented no evidence of depression, nor was any evidence t
within an inch of the trephine hole. The dura mater wa
and had lost its silvery appearance, and bulged into the op
being no evidence of brain pulsation. An aspirator needle
through the dura mater, and some of the subdural fluid rem
continued to flow after removal of the needle, the brain pu
becoming visible and being natural.

The removed portion of bone was now broken into pieces a
in trephine hole, a drainage tube being also inserted in cont
dura mater at place of opening made by aspirator needle; th
sutured, and dressed by zinc-sulphite gauze. The wound he
intention, and the drainage tube was removed seven days aft

Eleven days after operation all dressings were removed, and
allowed to walk about the Hospital. A month after operation
was discharged from Hospital, there being then no recurr
epileptiform convulsions, his speech being greatly improved
of hand and arm, while the muscular power had considerabl
This improvement had continued without intermission to
time—ten months after operation.

Sir William Stokes thought that Mr. Heuston should be co
on the result he had obtained in the remarkable case he had j
Sir William Stokes had previously had the patient under his
Meath Hospital, but he could not persuade the patient to su
operation of trephining, or rather the patient's wife would no
have it performed. Sir William Stokes had shown the case to
Horsley, who happened to be in Dublin at the time, and he
on the patient the desirability of the operation, but in vain.
thought that probably an unabsorbed clot of blood would be
situation where the injury was received, but apparently t
found. The trouble was then probably caused by pressur
thickened or hypertrophied condition of the bone at the seat o

Mr. Wheeler stated that one of the first cases that he ha
for epilepsy was a young man, a soldier, who had his skull
the left parietal region by a kick from a mule. A splin
was driven into the brain, causing epileptic seizures.
detailed the case nearly twenty years ago at the Surgi
and would only add, that this patient made a good re
has continued in perfect health, as far as he knew, ever
second case was a man of forty years, brought to him by
pupil, Dr. Kelly, who had been suffering from occasional
convulsions for three years, and who, three months before he
his notice, had convulsions every eight or nine days. A

it was ascertained that he had received a severe blow about
efore in the right front temporal region. After a little
trix was found in this situation, and after some considera-
d the crown of an inch trephine over the bone corresponding
x already mentioned. The inner table of the bone removed
hickened and adherent to the dura mater. Suffice to say
ry followed, and three years ago the man was well. The
at he could recall the history of at present was a patient
of Dublin Hospital, sent by Dr. Lyster, of Kilkenny,
fits, very occasional. He was only able to ascertain that
ad had slight seizures since he had received a blow fracturing
se to the left parietal eminence. He suffered from word-
d it was for this that Mr. Wheeler trephined him over the
he inner surface of the bone was thickened, and the dura
ed and adherent. There was not any abatement of the word-
m this operation, and it was not until three or four days
bserving the dura mater bulge—into which he made an
pus flowed out—that the patient improved, and finally
The next case that he could recall differed from the preceding
ch as it occurred in a young male adult, who suffered from a
ficiency, and had the operation of trephining recommended
y years previously by Sir James Simpson. The deficiency
e site of the lambdoid suture of the right side; pressure on
this deficiency caused great pain, and symptoms as if the
about to have a fit. He had suffered from as many as
its and more in the twenty-four hours. After operation
ived for three days, and had no return of the epilepsy,
had one seizure during the operation, and two before. In
hat Mr. Wheeler had operated for epilepsy consequent upon
d found the dura mater thickened, and within a very recent
he opportunity of seeing Mr. Nixon operate over the site of
the skull; when the bone was removed in this case the dura
normously thickened. Epilepsy caused by injury like the
was nearly always cured by operation in Mr. Wheeler's
but he had over and over again declined any operative
what was termed general epilepsy, the exact site of the
pticus" not being defined. There were forms of epilepsy
ght gauge the centre where the lesion was. Dr. Heuston
ed that the seventh nerves were engaged; it would be
him (Mr. Wheeler) to know whether the aphasia improved
ar power was gained, for his observations led him to con-
re was an almost definite ratio between the two. There
doubt that the patient whose history had been detailed,
aphasia.

Mr. Swanzy said:—I regret that Mr. Heuston has not c explanation of the symptom of difficulty of speech from whicl suffered. In the title of his paper he has termed it aphasia course of his paper he has, I venture to think, wisely avoide Having had the opportunity of carefully studying the case so I formed the opinion that the difficulty of speech was one of dysæsthesia, rather than aphasia. The man could speak, hesitation in finding the right words, and he understood all t to him. He could not write well, for he had never learne When I first saw him, long before the operation, I thought there was a lesion, hæmorrhage, or rupture of fibres in the pon giving rise to the dysæsthesia, twitching of the fingers of the le some blepharospasm which he had at the time. The result c tion shows that there could have been no material lesion there think these symptoms were distant symptoms due to ders functions in those parts, rather than in the cortex at the seat

Mr. Nixon said he thought no hard and fast rule could b as to replacing the bone, as this must altogether depend on t of the part removed. In a case in which he had recently t bone was in some places ½ inch in thickness—it was irregularl which greatly increased the difficulty of the operation, as o density of the skull over forty minutes were occupied in re first disc of bone. It was hard, dense, without diploe, and he believed it would have acted as a foreign body. He t Heuston was to be congratulated on the brilliant result he h in the case he brought forward to-night.

The President referred to trephining in such cases, and operation is one too often put off in the absence of serious s serious symptoms often develop suddenly. The President re case alluded to in his address on "Head Injuries," at the openi of the Surgical Section of the Royal Academy of Medicine The patient, a gentleman, had symptoms which, in his opini to the necessity for trephining; but his (the President's) hanc at consultations, and the operation was not permitted. T condition became much worse, and at a later period a porti exfoliated, and the patient recovered.

Mr. Heuston said the manner in which the bone was repla follows:—The bone being broken into small fragments by a b those fragments were placed into the trephine hole, resting c mater, with the intention that they should unite and further of union of the skull. This was done, not alone owing to th it was so highly recommended by different authorities, but had, in former cases of trephining, ample opportunity of obse fully they fulfilled the intended object. In one case, whe iad been performed, in the first operation no bone had been and a permanent opening in the skull remained, whilst in the ons bone had been placed in the trephine holes, and after a l no external evidence of the operation remained. I was r that Sir William Stokes had such an eminent authority as Horsley concur with him in the advisableness of operation, and remely that, owing to the man disappointing me in not coming ng, I was unable to show the result of the operation to him. Mr. Wheeler's observations respecting the implication of the ve, I would refer him to the spasmodic contractions of the the patient's face as indicating irritation of that nerve. The aring was not, however, implicated. My opinion as to the e case agrees very much with that expressed by Mr. Swanzy, at there were, in my opinion, distinct evidences of aphasia the case. Otherwise I am of the opinion that the chief vere due to an osteoplastic osteitis, with a pachymeningitis ing rise to a pressure on the brain in a twofold manner— e thickening of the bone and dura mater, and secondly from of the subdural fluid; otherwise I could not understand the t in the case after operation, or the absence of pulsation of ien the bone was removed.

on then adjourned.

SECTION OF MEDICINE.

J. Magee Finny, M.D.; President of the Royal College of
Physicians of Ireland.

ctional Secretary—A. N. Montgomery, M.R.C.P.I.

Friday, February 5, 1892.

The President in the Chair.

Living Specimen.

C. Tweedy exhibited a case of Xeroderma (Ichthyosis

The Dietetic Treatment of Enteric Fever.

lace Beatty read a paper on the dietetic treatment of enteric laid great stress upon the importance of care not only as to out also as to the quantity of food. He considered from two ts of milk in the twenty-four hours ample nourishment for r adult patients during the entire illness. He believed that patients who were fed on such a restricted diet suffered muc diarrhœa, tympanites, and sleeplessness than patients more li He called attention to the fact that when from some caus threatened hæmorrhage, the diet of patients had to be much r general improvement in all the symptoms followed. He advis care in the manner of changing the diet at the approach of conva a sudden change from liquid to solid food was, he believed provoke a fresh outburst of fever and bring on a relapse.

A Case of Recurrent Enteric Fever followed by True Re

Dr. J. W. Moore submitted a "clinical record" of a case not only did enteric fever recur in the same patient, but the attack was succeeded by a true relapse after an apyrexial perio or twelve days.

In April, 1877, the author attended, with the late Dr. Alfr and Sir George Owens, a lad of fifteen years, who passed typical attack of enteric fever lasting 23 days, in which, how stipation, and not diarrhœa, was the rule. In October, 1891 gentleman, at the age of twenty-nine, sickened of a fever wh to be undoubted enteric fever. After running an acute co days, followed by a sub-febrile period extending over another attack was succeeded by convalescence, which seemed to be in normal. On the eleventh or twelfth day, however, from the ment of apyrexia, acute febrile symptoms again showed them for the third time in his life the patient passed through an enteric fever.

Discussion.

The adjourned discussion on Dr. M. A. Boyd's paper Recent Modifications in our Views of Enteric Fever and its T which was read at the last meeting of the Section, was then connection with a discussion on the papers which had just bee

The **President** criticised one or two points in the clinical the case described by Dr. Moore, which occurred to him to nee tion. First, with reference to the significance of the diazo- action. In his own experience—and he had applied the test al to a large number of cases in Sir Patrick Dun's Hospital— rely upon it as by any means a safe clinical test, either as t or prognosis in fever, and he did not agree with Dr. Moor failure of the test was due in any way to the fact that his p had fever fifteen years before. Secondly, he asked further in as to the clinical means of recognising the very remarkab recorded of the heart, in early and marked weakness—vi

ide to side" with change of posture, when in his experience
o the teaching of the late Dr. Stokes, the impulse of the
f typhous softening cannot be felt at all in these cases, or
greatest difficulty.

WLEY did not think the question as to relapses in typhoid
ntil the whole question of immunity, natural and acquired,
nly known than it is at present—we do not know accurately
ective fevers got well at all; possibly the greater tendency
hoid fever as compared with such other fevers as typhus,
measles, was connected in some way with the long and
, and prolonged termination of the fever. With regard
food, there are some cases of typhoid in which the fever
wn, and the patient grows weaker until some solid food
a very difficult question to say exactly when the time has
is solid food, and he would look anxiously for further
his subject. With regard to diet, he did not think one
gmatic, seeing that the practice of skilful and experienced
ed so much as to the amount of food they allowed.

SMITH said that Dr. W. Beatty's paper was essentially a
limitation of Graves' celebrated maxim. But if it is
r-feed fevers, it is also certainly possible to over-feed
hurt the patient. Obstinate vomiting, for example,
y too zealous administration of milk. The condition of
more satisfactory guide as to convalescence than the
pulse, and two weeks, as a rule, should be allowed of
emperature before any liberties are granted to the patient.
le test applied to the urine of enteric fever is unreliable
y. It is merely a curious colour-test for a chromogen in

nsidered there could be no doubt of the value of a restricted
ver, there could be no doubt of the value of milk when
ent; but some patients are unable to digest milk, and
danger arises from cardiac failure, he considered properly
oths more suitable than quantities of milk. Though a
only cropped up incidentally, as Dr. Moore had mentioned
e in his case of enteric fever, Dr. Little was tempted to
hat quinine was so generally given in enteric fever? As
en no good effect was produced by quinine in enteric
imes headache, sleeplessness, and intestinal disturbance
use.

so joined in the discussion.

his reply to the criticisms on his paper on the antiseptic
ng enteric fever, considered that so far no more rational
g with the disease from its pathology presented itself, and

notwithstanding Dr. Smith's doubts as to any disinfectant intestine in sufficient strength to be of use after passing stomach and duodenum, he thought if any form of anti survive unaltered, the gaseous one should—especially in a so slowly parts with it. Chlorine evolved from an alkaline so as the liq. sodæ chlorinatæ of B. Ph.—in his hands was follow results than when formed in an acid mixture. As regards in enteric fever, they seemed to him to be due in most instan set of glands and Peyer's patches becoming the seat of fresh typhoid bacilli. He lately showed an instance in a pathologi exhibited at the last meeting of a portion of the ileum, the s ulceration in a patient who was ten days apyretic, when h acute perforation, the result of over-eating. This specimen long a condition of ulceration may exist after typhoid, ev temperature has fallen permanently for as long as a week.

Dr. Wallace Beatty, in reply, said that he quite agre Bewley and Dr. James Little, that exceptional cases of occur in which the evening temperature remains above the after all the other symptoms of enteric fever are over, ar discoverable complication is present. In these exceptional cas with Dr. Bewley and Dr. Little that solid food cannot be wi

Dr. J. W. Moore, in reply, agreed with the President an Smith that the diazo reaction was open to doubt as a diagnos fever; nevertheless, it was an interesting, and often a confi of the presence of this fever. He did not depend solely up as a method of physical examination of the heart, as th seemed to think, but both auscultation and percussion ind mobility of the heart in his patient's case.

In answer to Dr. Little, Dr. Moore said that he sometime doses of quinine in enteric fever—not to reduce temperature, which object large doses alone would avail—but as a ton experience of the remedy in other acute and prostrating mal

Once the specific origin of enteric fever was admitted, believed that no mere error in diet would bring about a although it may be a contributory cause of such an accident.

The Section then adjourned.

SECTION OF OBSTETRICS.

President—ANDREW J. HORNE, F.R.C.P.I.
Sectional Secretary—F. W. KIDD, M.D.

Friday, February 12, 1892.

The PRESIDENT in the Chair.

Exhibits.

LY exhibited—(*a*) Six cases of Pyosalpinx; (*b*) Three
for Cancer.

hibited—(*a*) Fibrocystic Tumour of Uterus; (*b*) Double
f Ovary; (*c*) Dermoid Cyst of Ovary with Cancerous
Cyst Wall.

of a Case of Ruptured Uterus, with Recovery.

-The patient, aged thirty-five, primipara: was 38 hours
saw her; liquor amnii had drained away early in labour.
igital examination, os uteri about the size of a florin,
On passing my finger through the os uteri I detected a
an oblique direction for about four inches. No prolapse
romontory of the sacrum easily felt, with vertex present-
of the pelvis. Conjugate diameter measured three inches.
a catheter and drawn off about a pint of bloody urine, I
to steady the uterus. Keeping pressure in the axis of
pelvis, I incised that portion between the os uteri and
forceps, I failed to deliver. Perforated head, when an
vas effected, but considerable difficulty experienced in
shoulders. The placenta, which was morbidly adherent,
o the fundus and slightly posteriorly. Patient made a
I saw the patient three months after delivery, when, on
e uterus was found normal in size and position, patient
rmally without pain. Os externum quite small, admitting
he point of a sound, very little evidence of rupture re-

he uterus is one of the most appalling complications met
ery practice, one also difficult to foresee or control. Up
g of the present century cases of ruptured uteri were
ndoned as being beyond human aid. The profession is
Douglas, being one of the first in Great Britain to resort
very, having reported a successful case in 1784. Active
actically dates from that time. Many difficulties are met

with in the diagnosis of this grave complication, and a nu
detection till after delivery. The majority are, however, e
nised. The patient herself is conscious that something has g
she suffers from acute localised abdominal pain; her appeara
anxious; cessation of labour pains; recession of the prese
hæmorrhage shock; quick, weak pulse; and dyspnœa. Th
result of the case will depend on the hæmorrhage; it is s
great that the patient dies before assistance can be rendered
number of cases where the hæmorrhage is not excessive, o
profound, prognosis, although grave, is much more favourabl

In conclusion, I would urge the following points as to trea

I. (*a*) If the fœtus is still in utero;
  (*b*) If the hæmorrhage cannot be controlled;
  (*c*) Or if you have prolapse of intestine—abdominal sec
  cated.

II. Deliver your patient as speedily as possible, and by t
that affords her the least risk.
  (*a*) If the fœtus is still *in utero*, os dilated, vertex presen
by forceps; or if the fœtus is dead, craniotomy.
  (*b*) Breech presentation, still *in utero*, deliver manually.
  (*c*) Shoulder presentation, if still *in utero*, deliver by
  or abdominal section.

III. It is dangerous to wait for reaction—
  As shock and collapse are most frequently due to h
  which, if not controlled, will quickly dispose of t

IV. Give stimulants by mouth and per rectum; ether hyp

Dr. Atthill said the case as described by Dr. Barry wa
able one, and as far as he (Dr. Atthill) was aware, no simi
been recorded. Here was a woman 38 hours in labour, an
the waters had long before drained away, with so small
diameter that the head never came in contact with the os,
occurred in a position so situated that the finger passed into
detect it; it evidently was a rupture of the cervix. Ho
have occurred under the conditions detailed Dr. Atthill wa
explain.

Fæcal Fistula following the Removal of Abdominal Tu

Mr. M'Ardle read a paper on fæcal fistula following the
abdominal tumours. After detailing cases of this trouble h
that the following seemed the methods of production:—

1st. Extension of suppuration from the tumour into the in
2nd. Ulceration from the intestine extending into the tumo
3rd. Local necrosis of the bowel wall due to pressure of the
4th. Tearing of the coats of the bowel during the operatio

ce of the nutrition of the bowel owing to injury of the stine.

pressure of the glass drainage tube in contact with the

the treatment, Mr. M'Ardle said—The situation of the wel will, more than any other circumstance, determine gical interference. While referring to this matter, there determining the site of perforation which does not seem recognised as it deserves. I refer to inflation with As a diagnostic aid, gaseous distension is infinitely jection of fluids, since it does not interfere with the ation which may be deemed necessary after its use, a source of constant annoyance during suture of the

acter of the discharge suffices to show the position of ther times the relation the intestines bear to the tumour lity of the fistula.

ing is in the rectum, closure is almost certain owing to portion of the gut, (*b*) great vascular supply, and (*c*) ra-peritoneal healing, hence early operative interference d.

and former pupil, Dr. Alfred Smith, gave me an atching the course of a case, which also came under the esident, in which a fistula from the middle third of the rough the lower angle of the abdominal incision and . In a few weeks this patient left for the country, and well. The cases in which surgical interference becomes se in which the perforation is high up and emaciation is the bowel has not formed a firm junction with the nd there is danger of infection of the peritoneum. In s, after the removal of a mass of tubercular glands from ssa, I found that the discharge, which was yellowish-elling, was from a coil of small intestine in which there apable of admitting my index finger. In this case, after , I removed the edge of the opening with scissors curved g an oval opening, its greatest length being 1¼ inch along the gut. This I closed with fine silk, using an ordinary d applied sutures after Lembert's method. I pushed into the abdomen, keeping them away from the wound a long forceps. I closed the peritoneal opening from n the perforated bowel. The course of the fistula was behind the cæcum, and its outer opening was at the est of the ilium. The sinus left after closure of the I scraped with Volkmann's scoop and plugged with

iodoform gauze, having first laid in a firm rubber drainag
patient made an uninterrupted recovery, and is now, five ye
operation, in perfect health.

If there be one thing more certain than another in refe
treatment of fistulæ, it is the point emphasised by the case
Croft, in which injudicious examination of the fistula by
finger into the bowel caused a slight breaking down of t
around the opening, and a fatal peritonitis.

The conclusions I have come to in reference to the treatm
are—

1st. Early interference is unjustifiable where the fistula is
portion of the intestine.

2nd. When operation is demanded it should be thorough,
the closure of the intestine, as in the case to which I have cal

Dr. Atthill had met with three cases of fæcal fistula in
In one of them the case had been diagnosticated as one of
ovarian tumour. The operation was performed under very
circumstances, the temperature before it being 103°. The tu
to be a suppurating one, and in addition there also was a
pelvic abscess, which during the removal of the tumour r
charging very fœtid pus. In this case fæces were dischar
the wound on the 15th day after the operation. Dr. Atthi
this case it was due to the softening of the intestines at th
pelvic abscess. This patient recovered perfectly, the fistu
about six months.

In the second case the fistula formed on the tenth day afte
tion, the tumour being a small ovarian one, very firmly bou
adhesions in the left inguinal fossa. An operation to cure th
performed nearly a year after, which ended fatally. The th
one which occurred seven days after vaginal hysterectomy f
disease. The fæces were discharged per vaginam for a fe
fistula then closed.

The President mentioned a case which he had seen with
Smith.

Dr. Macan asked if infection conveyed by the careless pr
sutures, in not making them aseptic, could have had anyth
the causation of fistula? He also suggested that the remova
of peritoneum might lead to the same result.

Dr. Smyly gave the details of several cases, in one of w
he believed the accident was caused by a rubber tube being
drainage tube to aspirate the fluid; that the aspiration had
intestine to be so injured by being sucked into the tube, that
was the result.

asked if any method had proved satisfactory to determine,
of the discharge or otherwise, whether the fistula existed
he small intestine?
, in reply, said that the case mentioned by the President
iew that perforation existed before operation, as the
nant, and was not so tense as is usual when gaseous dis-
om decomposition within the cyst. Dr. Atthill's cases
hat spontaneous healing usually takes place when the
ixed portions of the intestine. In answer to Dr. Macan,
l that he superintended the preparation of all ligature
ial, so that infection could have nothing to do with the
tula. The removal of the peritoneum only affects the
rfering with the vascular supply. Dr. Smyly's cases
ly that surgical interference was unnecessary when the
the rectum. Mr. M'Ardle could not agree with the
ction through a rubber tube could produce a perforation
l intestine like the rectum, while the constant pressure
is very likely to cause a local necrosis. Dr. Parsons
inent question about the diagnosis between fistula from
all intestine. Mr. M'Ardle referred to this in his com-
did not explain fully that gaseous distension enabled
the position of the opening, since, by passing the gas
nnected with a mercurial manometer, the large intestine
pressure of 1½ lbs., while it requires a pressure of 3 lbs.
come the resistance of the ileo-cæcal valve, and before
rge intestine is distinctly mapped out. This, taken in
he character of the discharge, shows accurately the site of
ning.

ENCH AND GERMAN DIPLOMAS, 1889–90.

al Record gives the following figures:—In the German
00 inhabitants) the German Universities conferred, in
1,125 diplomas of doctor of medicine, distributed as
163; Bonn, 110; Breslau, 42; Erlangen, 69;
iessen, 12; Göttingen, 25; Greifswald, 80; Halle, 36;
Jena, 42; Kiel, 48; Königsberg, 26; Leipzig, 2;
unich, 114; Rostock, 6; Strassburg, 63; Tübingen, 22;
The number of doctors rejected in 1888–89 was 1,030;
; in 1886–87, 847; in 1885–86, 685. In France
bitants, not reckoning the colonies) the number of doctors
-90 by the six French faculties was 597, a decrease of
eceding. Bordeaux rejected 60; Lille, 16; Lyons, 63;
Nancy, 26; Paris, 386.

SANITARY AND METEOROLOGICAL

Compiled by J. W. Moore, B.A., M.D., Univ. Dubl.; F.R.
F. R. Met. Soc.; Diplomate in State Medicine and ex-Sch. Trin.

Vital Statistics

For four Weeks ending Saturday, January 30, 1892.

The deaths registered in each of the four weeks in t
principal Town Districts of Ireland, alphabetically arrang
ponded to the following annual rates per 1,000:—

Towns	Weeks ending				Towns	Weeks en	
	Jan. 9.	Jan. 16.	Jan. 23.	Jan. 30.		Jan 9.	Jan. 16.
Armagh -	28·0	35·0	28·0	63·0	Limerick -	29·5	35·1
Belfast -	31·6	33·6	33·0	28·3	Lisburn -	30·0	34·3
Cork -	34·6	42·2	47·1	28·4	Londonderry	29·8	22·0
Drogheda	35·1	35·1	22·0	13·2	Lurgan -	36·5	22·8
Dublin -	34·6	43·0	53·5	40·7	Newry -	32·2	28·2
Dundalk -	37·7	25·1	33·5	41·9	Sligo -	0·0	51·6
Galway -	7·6	45·3	64·2	37·8	Waterford -	35·0	27·5
Kilkenny	4·7	28·3	28·3	18·9	Wexford -	27·1	31·6

In the week ending Saturday, January 9, 1892, the m
thirty-three large English towns, including London (in whi
was 32·8), was equal to an average annual death-rate of 28·
persons living. The average rate for eight principal towns
was 24·9 per 1,000. In Glasgow the rate was 23·9, and in
it was 24·0.

The average annual death-rate represented by the deaths
during the week in the sixteen principal town districts of Irela
per 1,000 of the population (unrevised) according to the recen

The deaths from the principal zymotic diseases in the sixte
were equal to an annual rate of 2·2 per 1,000, the rates va
0·0 in ten of the districts to 4·4 in Drogheda—the 8 deaths fro
registered in that district comprising 1 from diarrhœa.
155 deaths from all causes registered in Belfast are 2 from
from whooping-cough, 2 from enteric fever, 3 from diarrho

from diseases of the respiratory system. The 50 deaths e 1 from whooping-cough, 1 from enteric fever, 1 from om phthisis, and 17 from diseases of the respiratory deaths from influenza are specially reported by the lfast No. 3 District, 2 by the Assistant-Registrar of istrict, 1 by the Registrar of Belfast No. 5 District, and ar of Waterford No. 1 District.

Registration District the registered births amounted to d 70 girls; and the registered deaths to 235—116 males

present an annual rate of mortality of 35·1 in every ulation according to the Census of 1891, being 2·0 above or the first week of the last ten years. Omitting the ng 3) of persons admitted into public institutions from the district, the rate was 34·6 per 1,000.

f deaths from zymotic diseases registered is 36, being 13 average for the corresponding week of the last ten years, number for the week ended January 2. The 36 deaths m influenza and its complications, 10 from whooping- phtheria, 1 from ill-defined fever, 4 from enteric fever, hœa.

umber of cases of enteric fever admitted to hospital, from 24 in the week ended December 19, to 20 in the nd to 17 in the week ended January 2, fell to 14, which nber of admissions in any week since that ended the 12th st. Twenty enteric fever patients were discharged, 3 mained under treatment on Saturday, being 9 under the al at the close of the preceding week.

dmissions for the week include also 2 cases of measles, arlatina or of typhus were received. Two cases of measles, nd 5 of typhus, remained under treatment in hospital on

eaths from diseases of the respiratory system were 6 over the average for the corresponding week of the t 20 under the number for the week ended January 2. from bronchitis and 13 from pneumonia or inflammation

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nding Saturday, January 16, the mortality in thirty- lish towns, including London (in which the rate was to an average annual death-rate of 33·0 per 1,000 persons rage rate for eight principal towns of Scotland was 23 9 Glasgow the rate was 24·6, and in Edinburgh it was

The average annual death-rate in the sixteen principal tow
of Ireland was 37·5 per 1,000 of the population (unrevised) ac
the recent Census.

The deaths from the principal zymotic diseases in the sixtee
were equal to an annual rate of 1·5 per 1,000, the rates vary
0·0 in ten of the districts to 5·2 in Sligo—the 10 deaths from
registered in that district comprising 1 from diarrhœa. A
165 deaths from all causes registered in Belfast are 1 from
from whooping-cough, 1 from diphtheria, 1 from enteric
from diarrhœa, 23 from phthisis, and 65 from diseases of the r
system. The 61 deaths in Cork comprise 1 from enteric feve
phthisis, and 22 from diseases of the respiratory system.

In the Dublin Registration District the registered births an
166—84 boys and 82 girls; and the registered deaths to
males and 171 females.

The deaths, which are 65 over the average number for the co
ing week of the last ten years, represent an annual rate of m
43·9 in every 1,000 of the population. Omitting the deaths (n
6) of persons admitted into public institutions from localiti
the district, the rate was 43·0 per 1,000. During the first two
the current year the death-rate averaged 39·5, and was 5·9 ove
rate in the corresponding period of the ten years 1882–1891

Forty-nine deaths from zymotic diseases were registered,
over the number for the preceding week and 22 in excess of th
for the second week of the last ten years. They comprise
influenza and its complications (against 13 for the precedin
from whooping-cough, 2 from enteric fever, 1 from diarrhœa, a
dysentery.

There has been a further decline in the number of cases
fever admitted to hospital, the admissions numbering 8 onl
14, 17, 20, and 24, respectively, for the four weeks preceding.
nine enteric fever patients were discharged, 2 died, and 83
under treatment on Saturday, being 23 under the number in h
Saturday, January 9.

The hospital admissions for the week include 2 cases o
and 1 of scarlatina, but no cases of typhus were received. Fo
measles, 8 of scarlatina, and 5 of typhus remained under tre
hospital on Saturday.

Deaths from diseases of the respiratory system, which
from 87 for the week ended January 2 to 67 for the following
this week to 95—or 31 over the average for the correspon
of the last ten years The 95 deaths comprise 77 from bron
13 from pneumonia or inflammation of the lungs.

ending Saturday, January 23, the mortality in thirty-
glish towns, including London (in which the rate was
l to an average annual death-rate of 35·4 per 1,000 persons
erage rate for eight principal towns of Scotland was 27·2
Glasgow the rate was 28·4, and in Edinburgh it was 21·8.
annual death-rate represented by the deaths registered in
cipal town districts of Ireland was 43·9 per 1,000 of the
ation based on the Census of 1891.

om the principal zymotic diseases in the sixteen districts
annual rate of 2·5 per 1,000, the rates varying from 0·0
ricts to 4·7 in Londonderry—the 18 deaths from all causes
at district comprising 3 from whooping-cough. Among
rom all causes registered in Belfast are 4 from measles, 3
cough, 1 from simple continued fever, 3 from enteric fever,
, 23 from phthisis, and 63 from diseases of the respiratory
deaths in Cork comprise 2 from whooping-cough, 1 from
from diarrhœa, 8 from phthisis, and 33 from diseases of
system. The 37 deaths in Limerick comprise 2 from
, 3 from phthisis, and 21 from diseases of the respiratory
aths from influenza are specially reported by the Registrar
o. 1 District, and 1 death by the Registrar of Lisburn

Registration District the registered births amounted to
nd 93 girls; and the registered deaths to 363—144 males
.

vhich are 141 over the average number for the cor-
k of the last ten years, represent an annual rate of
in every 1,000 of the population. Omitting the deaths
f persons admitted into public institutions from localities
ict, the rate was 53·5 per 1,000. During the first three
rrent year the death-rate averaged 44·4 and was 10·9
rate in the corresponding period of the ten years 1882–

rom zymotic diseases were registered, being 1 over the
preceding week and 24 in excess of the average for the
e last ten years They comprise 1 from measles, 25 from
complications, 10 from whooping-cough, 2 from diph-
teric fever, and 2 from diarrhœa.

of enteric fever were admitted to hospital, being 5 under
dmissions for the preceding week, and 11 under that for
January 9. Twenty-four enteric fever patients were
62 remained under treatment on Saturday, being 21
er in hospital at the close of the preceding week.

admissions for the week include, also, 4 cases of measles, 1 case of scarlatina, and 1 of typhus Six cases of measles, 8 and 1 case of typhus remained under treatment in hospital

Deaths from diseases of the respiratory system amount 32 over the number for the preceding week and 65 over th the third week of the last ten years. They comprise 90 fr and 20 from pneumonia or inflammation of the lungs.

In the week ending Saturday, January 30, the mortal three large English towns, including London (in which the r was equal to an average annual death-rate of 32·1 per living. The average rate for eight principal towns of Scot per 1,000. In Glasgow the rate was 26·0, and in Edin 22·4.

The average annual death-rate in the sixteen principal of Ireland was 34·9 per 1,000 of the population (unrevised the recent Census.

The deaths from the principal zymotic diseases registered districts were equal to an annual rate of 1·9 per 1,000, the from 0·0 in nine of the districts to 7·0 in Armagh—the 9 d causes registered in that district comprising 1 from typhus. 139 deaths from all causes registered in Belfast are 1 fr from whooping-cough, 1 from simple continued fever, 3 from 3 from diarrhœa, 19 from phthisis, and 45 from diseases o tory system. The 41 deaths in Cork comprise 2 from wh 1 from enteric fever, 3 from phthisis, and 18 from diseases tory system. Among the 36 deaths in Limerick are 2 fr cough, 1 from diarrhœa, 2 from phthisis, and 17 from diseases tory system. The 20 deaths in Londonderry comprise 1 fr cough. Four deaths from influenza are specially reported by of Waterford No. 1 District, 4 by the Assistant-Registra District, 2 by the Registrar of Wexford District, and 1 b Registrar of Cork No. 8 District. The Assistant-Registra District states—"The influenza epidemic is very much o very few fresh cases having come under our notice."

In the Dublin Registration District the registered birth 178—84 boys and 94 girls; and the registered deaths to 2 and 144 females.

The deaths, which are 53 over the average number for t ing week of the last ten years, represent an annual rate of mo in every 1,000 of the population. Omitting the deaths (nu persons admitted into public institutions from localities outsi the rate was 40·7 per 1,000. During the first four weeks year the death-rate averaged 43·7, and was 10·2 over the the corresponding period of the ten years 1882–1891.

r of deaths from zymotic diseases registered is 42, being 16 age for the corresponding week of the last ten years, but number for the week ended January 23. The 42 deaths from influenza and its complications (an increase of 5 as h the number for the preceding week), 5 from whooping- enteric fever, and 1 from dysentery.

of enteric fever were admitted to hospital, being 5 over the the preceding week and equal to the number of admissions nded January 16. Eight enteric fever patients were dis- ed, and 61 remained under treatment on Saturday, being 1 nber in hospital at the close of the preceding week.

l admissions for the week include, also, 3 cases of measles, latina, and 2 cases of typhus. Eight cases of measles, 7 and 3 of typhus remained under treatment in hospital on

n diseases of the respiratory system, which had risen from eek ended January 16, to 127 for the following week, fell to umber is 19 in excess of the average for the corresponding st ten years. The 81 deaths comprise 61 from bronchitis, monia or inflammation of the lungs, and 2 from croup.

METEOROLOGY.

bservations made in the City of Dublin, Lat. 53° 20′ *N.* *ng.* 6° 15′ *W., for the Month of January,* 1892.

ht of Barometer,	29·857 inches.
eight of Barometer (on 25th, at 3 p.m.),	30·484 „
eight of Barometer (on 16th, at 2 p.m.)	29·125 „
bulb Temperature,	38·5°.
bulb Temperature,	37·2°.
point Temperature,	35·1°.
ic Force (Tension) of Aqueous Vapour,	·209 inch.
idity,	88·0 per cent.
mperature in Shade (on 29th)	54·0°.
nperature in Shade (on 10th),	22·2°.
nperature on Grass (Radiation) (on 10th),	16·0°.
unt of Cloud,	63·6 per cent.
n 20 days),	1·698 inches.
aily Rainfall (on 16th),	·618 inch.
irections of Wind,	W.,N.W.,S.W.

Remarks.

nt, cold, and cloudy month.

f cold, which was ushered in by frequent snowstorms early , lasted, with slight and temporary intermissions, until the

23rd, when, as in January, 1891, the southwesterly typ
became permanently established over Western Europe, stron
winds, high but variable temperature, and frequent showe
prevailing day after day to the end of the month. To
change is due the fact that the mean temperature was onl
the average, notwithstanding the cold of the first three week
Year.

In Dublin the arithmetical mean temperature (38·8°) w
below the average (41·4°); the mean dry bulb readings at 9 a.
were 38·5°. In the twenty-seven years ending with 1891,
coldest in 1881 (M. T. = 32·2°), and warmest in 1875 (M.
In 1867 the M. T. was 35·7°, and in 1865 it was 37·8°.
in 1886 the M T. was 37·9°; in 1879 (the "cold year"),
In 1888 the M. T. was 42·1°; in 1889 it was 42·4°. in1890
and in 1891 it was 40·1°. As a general rule, January in
colder, but a shade warmer, than December. This is owin
development in January of a winter area of low press
Atlantic, to the northwestward of the British Isles, and t
prevalence of S.W. winds in their vicinity. January, 189
exception to this rule, the M.T. being 4·2° below that of De
(43·0°).

The mean height of the barometer was 29·857 inches,
below the corrected average value for January—namely, 2
and as much as 0·228 inch below the mean for January, 1
30·085 inches. The mercury rose to 30·484 inches at 3
25th, and fell to 29·125 inches at 2 p.m. of the 16th.
range of atmospherical pressure was, therefore, as much as 1
that is, a little less than one inch and four-tenths.

The mean temperature deduced from daily readings of
thermometer at 9 a.m. and 9 p.m. was 38·5°, or 3·8° below
December, 1891. Using the formula, *Mean Temp. = Mi*
min. × ·52), the M. T. becomes 38·9°, compared with a twen
average of 41·5°. The arithmetical mean of the maximal
readings was 38·8°, compared with a twenty-five years' aver
On the 29th the thermometer in the screen rose to 54·0°—w
the 10th the temperature fell to 22·2°—wind, N.W. The
the grass was 16·0° on the last-named date.

The rainfall was 1·698 inches, distributed over 20 days.
rainfall for January in the twenty-five years, 1865–89, in
2·200 inches, and the average number of rainy days was 17·3
fall, therefore, was considerably below the average, while th
rainy days was equally above it. In 1877 the rainfall in Jan
large—4·322 inches on 25 days; in 1869, also, 4·258 inc
however, only 18 days. On the other hand, in 1876, only ·4

on but 9 days; and in 1880 the rainfall was only ·563
but 8 days. In January, 1886, 3·244 inches of rain were
as many as 26 days; in 1887 ("the dry year"), 1·816
16 days; in 1888, 1·247 inches on 9 days; in 1889, 2·213
ays; in 1890, 2·975 inches on 21 days; and in 1891, only
on 14 days.

vere seen on the 15th and 21st. Lunar halos were seen
11th. There was an aurora borealis on the night of the
osphere was foggy on the 18th and five following days, as
t. High winds were noted on 15 days, reaching the force
days—the 7th, 10th, 16th, 27th, 28th, and 29th. Hail
and 10th, and snow or sleet on the 3rd, 6th, 7th, 8th, 9th,
. Temperature exceeded 50° in the screen on 6 days,
only 5 days in January, 1891, 17 days in January, 1890,
January, 1889; while it fell to or below 32° in the screen
compared with 7 nights in January, 1891, 1 night in
, and 3 nights in January, 1889. The minima on the
°, or less, on 25 nights, compared with 21 nights in
15 nights in January, 1890, and 16 nights in January,

ning of the month the weather was cold but fine. Very
erly weather held during the week ended Saturday, the
ed to be the coldest experienced in Dublin since the present
The type of distribution of atmospherical pressure was
nic in the N. and N.E., anticyclonic in the S.W. of Europe.
p depressions passed southeastwards across Scandinavia
while a succession of secondary, or subsidiary, depressions
same direction across the British Islands. Hence fresh
and gales from W.S.W. to N. were felt in Scotland and
snow, hail, and sleet fell in large quantities on several
day, the 5th, a temporary rise of the thermometer occurred
of the depressions and drizzling rain fell in Dublin, but
rain and snow, the weather cleared, becoming fine and
a heavy fall of snow occurred, and this was followed on
noon by a downright "blizzard." On Friday, also, snow-
over nearly the whole of Ireland, and on Saturday a
ailed, which became intense in the evening. In Dublin
t of the barometer was 29·764 inches, pressure ranging
inches at 9 a.m. of Monday (wind N.W.), and 29·232
. of Thursday (wind W.). The corrected mean tempera-
, the mean dry bulb readings at 9 a.m. and 9 p.m. being
reened thermometers rose to 45·4° on Tuesday and fell to
day, when the grass minimum was 17·8° at 9 p.m. The
entirely in the form of snow and hail) was ·283 inch on

five days. Of this amount ·104 inch fell on Friday. Th
wind was N.W. Aurora borealis was seen on Tuesday night,
halo appeared on Saturday evening.

Very cold, inclement weather continued through the
Saturday, the 16th, but in Ireland a decided thaw set in on
was followed by a gale from S. to S.E. and heavy rain on Sat
to this time the changes of atmospherical pressure over No
Europe were very erratic and irregular. On Sunday a
depression lay over Brittany and Normandy, and caused a
wind on the east coast of Ireland, where a temporary t
accompanied by hail showers and some thunder and lightnin
In the early morning of this day the frost had been very inten
Ireland—at 8 a.m. the thermometer read 13° at Parsonstow
in the city of Dublin temperature had been down to 22·2° i
and to 16·0° on the ground. Monday was again very cold,
frost returned. Both the barometer and thermometer now
unsteady and so continued until Friday, when an extensi
depression began to "edge in" from the Atlantic. This
gradients for southerly winds, a rise of temperature, and he
Saturday. In Dublin the mean height of the barometer
inches, pressure ranging between 30·095 inches at 9 a.m.
(wind N.) and 29·125 inches at 2 p.m. of Saturday (wind
corrected mean temperature was 34·4°, the mean dry bulb
a.m. and 9 p.m. was 34·5°. The screened thermometers r
on Saturday, having fallen to 22·2° on Sunday. The rainfal
to ·749 inch on three days, ·618 inch being measured on Sat
wind was variable in direction.

The week ended Saturday, the 23rd, witnessed the gradu
ment of a warm southwesterly current over the whole of
Islands, while the weather remained extremely cold in Russia,
and Central Europe. The period opened with a gale fro
heavy rain in Dublin, but the wind moderated early on Sund
and a spell of calm, damp, foggy, dull weather set in,
Thursday. The fog was particularly dense on Tuesday mo
temperature was slightly below freezing point in the screen.
day the south wind freshened in Ireland, blowing a moder
gale on the southern and western coasts. The last two
changeable and rainy or showery at times. On Saturday a
rise of temperature took place, the thermometer exceeding 5
for the first time since December 29, 1891. On the Contin
was very intense during the week. At Munich the thermon
3° on Thursday morning, and at Haparanda, on the Gulf of
minimal temperatures were −13°, −17°, −7°, −14°, −17°
−19° (?) respectively. In Dublin the mean height of the ba

phthisis, and 60 from diseases of the respiratory system. The 50 deaths in Cork comprise 1 from whooping-cough, 1 from enteric fever, 1 from diarrhœa, 5 from phthisis, and 17 from diseases of the respiratory system. Two deaths from influenza are specially reported by the Registrar of Belfast No. 3 District, 2 by the Assistant-Registrar of Belfast No. 4 District, 1 by the Registrar of Belfast No. 5 District, and by the Registrar of Waterford No. 1 District.

In the Dublin Registration District the registered births amounted to 62—92 boys and 70 girls; and the registered deaths to 235—116 males nd 119 females.

The deaths represent an annual rate of mortality of 35·1 in every 000 of the population according to the Census of 1891, being 2·0 above e mean rate for the first week of the last ten years. Omitting the aths (numbering 3) of persons admitted into public institutions from alities outside the district, the rate was 34·6 per 1,000.

The number of deaths from zymotic diseases registered is 36, being 13 excess of the average for the corresponding week of the last ten years, 2 under the number for the week ended January 2. The 36 deaths mprise 13 from influenza and its complications, 10 from whooping-gh, 1 from diphtheria, 1 from ill-defined fever, 4 from enteric fever, d 1 from diarrhœa.

The weekly number of cases of enteric fever admitted to hospital, which had fallen from 24 in the week ended December 19, to 20 in the lowing week and to 17 in the week ended January 2, fell to 14, which is the lowest number of admissions in any week since that ended the 12th of September last. Twenty enteric fever patients were discharged, 3 died and 106 remained under treatment on Saturday, being 9 under the number in hospital at the close of the preceding week.

The hospital admissions for the week include also 2 cases of measles, but no cases of scarlatina or of typhus were received. Two cases of measles, 7 of scarlatina, and 5 of typhus, remained under treatment in hospital on Saturday.

Sixty-seven deaths from diseases of the respiratory system were registered, being 6 over the average for the corresponding week of the last ten years, but 20 under the number for the week ended January 2. They comprise 53 from bronchitis and 13 from pneumonia or inflammation of the lungs.

In the week ending Saturday, January 16, the mortality in thirty-three large English towns, including London (in which the rate was 0·0), was equal to an average annual death-rate of 33·0 per 1,000 persons iving. The average rate for eight principal towns of Scotland was 23 9 er 1,000. In Glasgow the rate was 24·6, and in Edinburgh it was 9·4.

PERISCOPE.

ARMY MEDICAL STAFF.

THE following is the official list of successful candidates for commissi in the Medical Staff of Her Majesty's Army, at the examination held London in February, 1892:—

Order of Merit	Names	No. of Marks	Order of Merit	Names	No. Mar
1	Hinge, H. A.	3,160	14	Jones, T. P.	2,8
2	M'Dermott, T.	3,160	15	Marder, N.	2,8
3	Bray, H. A.	3,140	16	Thurston, H. S.	2,8
4	Hodgens, C. O'C.	3,095	17	Lewis, R. C.	2,7
5	Slayter, E. W.	3,070	18	More, L. P.	2,7
6	Erskine, W. D.	3,020	19	Faichnie, F.	2,7
7	Tyrrell, A. F.	2,945	20	Walker, G. S.	2,7
8	M'Naught, J. G.	2,940	21	O'Reilly, W. H.	2,7
9	Smyth, W. J.	2,940	22	Mansfield, G. S.	2,7
10	Chambers, J. G.	2,910	23	Ryall, W. P.	2,6
11	Austin, R. F. E.	2,900	24	Thompson, A. G.	2,6
12	Moore, G. A.	2,900	25	Read, H. W. K.	2,6
13	Condon, E. H.	2,870			

EXAMINATION OF CANDIDATES FOR HER MAJESTY'S ARMY AND INDI MEDICAL SERVICES.

Natural Sciences.—Dr. Allman—Tuesday, 9th February, 1892—fro p.m till 6 p.m.—[N.B.—The replies to be written with the ink provi and not with a pencil or pale ink.] Zoology—1. Refer to its sub-king and class an animal with the following characters, and give example Body with transverse segmentation; a ganglionated ventral chord; h thorax, and abdomen distinctly separated; respiration by trachea. What are the essential characters by which the *cœlenterata* are di guished as a separate group of the animal kingdom? Give one or examples of a cœlenterate animal. 3. Give (qualitatively) the comp tion of cellulose, and adduce from the animal kingdom some instan show that cellulose is not, as formerly supposed, exclusively confine plants. Botany—4. Mention any instance known to you in the history of a plant which illustrates the law of Alternation of Generat 5. What are the principal substances which may be deposited in walls of the vegetable cell so as to give it rigidity and increase its p of resisting organic decomposition? Cite some instances of plants in which cells so constituted occur. 6. Refer to its natural order a plant with the following characters, and give one or more examples:—Leaves alternate without stipules; calyx formed of two sepals which are caducous; corolla with four petals; stamens numerous, inserted on the receptacle; fruit a single-celled capsule with parietal placentæ; seeds numerous with oily albumen. Physics—7. Explain the formation of dew. 8. State the evidence on which we affirm the former existence of glaciers in places where they are no longer to be found. 9. What is meant by the "Torricellian vacuum?" On what physical properties does the existence of this vacuum depend?

Anatomy and Physiology.—Sir Joseph Fayrer.—Monday, 8th February, 1892—from 10 a.m. till 1 p.m.—1. Describe the inferior maxillary bone, giving an account of the muscles, ligaments, and other parts of importance connected with it. 2. Describe the origin, course, distribution, and functions of the musculo-spiral nerve. 3. Describe the structure, anatomical relations and functions of the large intestine. 4. Describe the origin, distribution, and communications of the portal vein; give an account also of the character and composition of the blood contained in it, and the office it performs in the animal economy. 5. Describe the structure, anatomical relations, and connections of the peritoneum.

Medicine.—Sir William Aitken.—Tuesday, 9th February, 1892—from 10 a.m. till 1 p.m.—1. A case for analysis and commentary:—Private W. R., 4th Battalion 60th Royal Rifle Brigade, had seven years' service when he died on the 25th of July, 1865, at Montreal. He was then thirty years of age; had been a hard liver, intemperate, and frequently a prisoner. He had been four years at the station (Montreal) at which he died. In 1859 he suffered from hæmorrhoids, but generally was at his duty and not sickly. Early in July, 1865, he complained of diarrhœa, which was prevalent among the men at the time. For this affection he had medicine on two or three occasions, and reported himself relieved thereby. On the morning of the 14th of July he was admitted into hospital. His face was blanched, his lips bloodless, and his general aspect that of a man in the first stage of cholera. He complained then of nausea and diarrhœa. A diaphoretic stimulating draught containing an anodyne was administered, and the patient put to bed. The next day he complained of tenesmus and a feeling of fulness in the rectum. He had been two or three times during the night to the night-stool, but had passed only six ounces of fluid blood. The examination of the abdomen by manipulation caused no pain, nor revealed any abnormality; and no signs of hæmorrhoids could be detected. The day following admission some feculent matter was passed. It was consistent in substance but pale in colour, and with it came away another discharge of blood. On the 17th (fourth day after admission) a large enema of lukewarm water was injected into the rectum, and an enormou fæces followed. The matter passed was pale, somewhat c tence of thick oatmeal porridge. In quantity it more than night-pan, and it was accompanied as before by a large f During the three following days the symptoms were ve still passed blood, and on two occasions scybala, but he ha sickness of stomach, nor other symptoms of a definite kind. medicines, such as *pil. plumb. acet. c. opio*, and enemata of together with purgatives, such as *pil. rhei co.* with tara administered to check the bleeding, and bring on a healthy the intestines. The bowels got rid of small portions of har but every effort was accompanied with the usual flow of bl morning of the 23rd (tenth day after admission) the sympto the same as before. A small piece of hardened fæces had and blood also as before. A dose of castor-oil and turpenti but the dose was followed by no satisfactory result. The tainly did not return, but in the afternoon vomiting set in, had been absent; and on the morning of the 25th (twel admission) the patient died. The vomites contained nothi be called stercoraceous. There was dark green bile mi beef tea, or milk, or wine, or whatever he had swallowe but no feculent matter. About twelve hours before death he set in. The pupils became enormously dilated, the bladd act, jactitation ensued, and the vomiting, which had aba time, returned. He died comatose. [Discuss fully the this case, as to symptoms, nature, treatment, and probabl appearances.] 2. Write what you know regarding the mode of origin, the effects, the symptoms and treatment c and bile concretions. 3. Name the common intestinal wo man. State what you know as to how each of the parasites y access to the body of man; the symptoms of the presence c the treatment curative and prophylactic of each of the what you know regarding the differential diagnosis of paralysis (Bell's Paralysis.) 5, Name the official prepar British Pharmacopœia which contain arsenious acid. State of arsenic in each; and the doses of each. Describe t arsenic; and the symptoms which follow its use in extreme

Chemistry.—Dr. Allman.—Tuesday, 9th February, 1892— till 4 p.m.—1. Organic food substances may be divided into the nitrogenous and the non-nitrogenous. Give some exan of these classes. 2. What is the result of heating ammon with quicklime? Write down the equation which expresses in this process. 3. Write down in their order the formulæ forming the marsh gas series, beginning with that of m carrying it as far as five terms. Give in a formula the quantity by which each term of the series differs from its predecessor.

Surgery.—Mr. Pollock.—Monday, 8th February, 1892—from 2 p.m. to 5 p.m.—1. Describe the relative symptoms by which dislocation of the head of the femur, on the dorsum of the ilium, may be diagnosed from dislocation into the sciatic notch. Also describe the measures requisite to reduce each dislocation. 2. By what symptoms may an impacted fracture of the neck of the femur be diagnosed from either of the above-named dislocations? What treatment is best in such an injury? 3. What are the most common causes of inflammation of veins? Describe the effects of such inflammation when implicating one of the lower limbs; and the treatment to be pursued under its various stages. 4. Given a case of stone in the bladder. State under what conditions, and circumstances, would the operation of crushing—the lateral operation—or the suprapubic operation be preferable. 5. A man has a hard chancre of three or four weeks' duration. What treatment should be adopted in such a case? What are the probable results, as regards secondary, or tertiary, complications? And, provided the patient is unmarried, what advice should be given as regards matrimony? 6. Describe the preliminary symptoms, and subsequent progress of a case of senile gangrene. To what arterial changes is this form of gangrene generally due? And what is the best treatment to be adopted in the progress of such a case?

BIRD SURGERY.

We are indebted to the *Medical Record* (N.Y.) for the following "interesting observations relating to the surgical treatment of wounds by birds," contained in a communication made to the Physical Society of Geneva by M. Fatio. They are worthy of the columns of the *Spectator*:—

"He quotes the case of the snipe, which he has often observed engaged in repairing damages. With its beak and feathers it makes a very creditable dressing, applying plasters to bleeding wounds and even securing a broken limb by means of a stout ligature. On one occasion he killed a snipe which had on the chest a large dressing composed of down taken from other parts of the body and securely fixed to the wound by the coagulated blood. Twice he had brought home snipe with nterwoven feathers strapped on to the site of fracture of one or other imb. The most interesting example was that of a snipe both of whose egs he had unfortunately broken by a misdirected shot. He recovered he animal only on the day following, and he then found that the poor ird had contrived to apply dressings and a sort of splint to both limbs. n carrying out this operation some feathers had become entangled around he beak, and not being able to use its claws to get rid of them, it was lmost dead from hunger when discovered. In a case recorded by

M. Magnin, a snipe which was observed to fly away with a bro
subsequently found to have forced the fragments into a para
the upper fragments reaching to the knee, and secured th
means of a strong band of feathers and moss intermingled. T
were particularly struck by the application of a ligature of a
leafed grass wound round the limb, of a spiral form and fix
of a sort of glue."

BRITISH MEDICAL SERVICE.

We have received from the authorities the following list of
probation of the medical staff of the British Army who we
at both the London and Netley examinations. The prizes
for marks gained in the special subjects taught at the Ar
School. The final positions of these gentlemen are determ
marks gained in London added to those gained at Netley, a
bined numbers are accordingly shown in the list which foll
1st, 1892. Combined Marks:—1. Pilcher,[a] E. M., 6,094;
H. P., 5,421; 3. Beyts, W. G., 5,219; 4. Stalkartt, H. A
Dunn, H. N., 4,832; 6. Withers, S. H., 4,794; 7. Morp
4,744; 8. Anderson, E. C., 4,648; 9. Tyacke, N., 4,619;
H. E. G., 4,562; 11. Mitchell, L. A., 4,549; 12. Fleming,
13. Hennessy, J., 4,506; 14. Martin, C. B., 4,501; 15. B
J., 4,395; 16. Lawson, C. B., 4366; 17. Hughes, G. E.,
Kelly, J. F. M., 4,337; 19. Crawford, G. S., 4,286; 20. A
D., 4,260.

DETERMINATION OF SEX.

A note in *Lo Sperimentale*, of Florence, informs us that
Moutanel, of Valparaiso, read a paper before the last Chil
Congress on the procreation of either sex at will. After
observation he had satisfied himself that we can pronounce
of an unborn fœtus if we know the number of menstruations
occurred between the preceding delivery and the present pre
between the birth of one baby and the conception of
even number of menstruations have taken place, the secon
the same sex as the first; if an uneven number, of different
theory assumes the identity of menstruation and ovulation
accept; and also that ova discharged are of alternate sexes.

THE CEREBELLUM.

Dr. Courmont, of Lyons—we learn from the *N. Y. Medica*
about to publish a work disputing the generally-accepted v
functions of the cerebellum. Prof. Folet has put forward a
in advance in the *Bulletin Médical* (No. 45, 1891). Courm

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[a] Gained the Montefiore second prize.

that the cerebrum and cerebellum are similar in function as well as in structure. The cerebellum is a centre for the registration of certain impressions, and for the origin of various psychical manifestations. It is the seat of the unreasoning mental processes—as love, hatred, joy, sorrow, &c. As the cerebrum is the organ of sense, so is the cerebellum the organ of sentiment, and accordingly the latter is proportionally larger in women. The publication of M. Courmont's views and arguments will be received with interest.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

Pure Volatile Eucalyptus Oil.

This essential oil, distilled from the leaves of the citron-scented eucalyptus (*Eucalyptus maculata*, var. *citriodora*), is by far the finest, most fragrant, and most delicate specimen of eucalyptus oil which it has been our good fortune to examine.

The citron-scented gum-tree (*Eucalyptus citriodora*) is a comparatively rare variety of the "spotted gum." It grows only in the Port Curtis (Gladstone) district of Queensland. Infinite pains are taken in the distillation of the oil. In the first place, the trees are judiciously pruned, so as to retard the growth of the wood and to promote that of the young leaves. These yield the finest oil and are the most fragrant. They are picked free from stalks, in order to exclude resinous, terebinthinate, and other crude matter, and are then carefully distilled by Mr. A. Jefferies Timbury's Eucalyptus Oil Company at Gladstone, Queensland.

Towards the close of 1890, Messrs. Schimmel & Co., of Leipzig, reported as follows upon this oil:—"It possesses a specific gravity of 0·873 at 150° C. When distilled, about three-quarters goes over between 205° and 210°, while smaller quantities boil under and over these temperatures. The fraction 205°–210° consists almost entirely of pure citronellon. When shaken with a solution of bisulphate of sodium, the mixture becomes hot and changes to a fairly solid mass. From this, after washing with ether, pure citronellon separates on decomposition with soda solution."

"Timbury's Eucalyptus Oil" is intended for both internal and external use. The dose for an adult is from one to five drops, which may be taken on a lump of sugar. A few drops sprinkled on a pocket-handkerchief may be inhaled from time to time with the object of relieving a common cold, or the more serious influenza, or whooping-cough. Of the relief afforded by the oil used in either way we can speak from practical experience.

There can be no doubt that in this elegant preparation, also, we possess valuable antiseptic, disinfectant, and deodorising agent.

RECLAMATION BY DR. THOMAS DUTT

We have received the following letter from Dr. Dutton, i
the Review of his work on "Indigestion" which appeared
of this Journal for February, 1892:—

"Craven House, Northumberla
"London, *Feb.* 15*th*,

"J. W. Moore, B.A., M.D., F.R.C.P.,
"Editor of The Dublin Journal of Medical S
"Sir,

"I have been forwarded The Dublin Journal of Me
in which I see a review of my work on "Indigestion," and, as the s
it is a most *unfair review*, and has the appearance of a tinge of

"This is the opinion of every medical man I have shown it an

"I grant some of the text has been too hastily passed through
that it is of no use to the profession or the general reader I en
and tell the reviewer he is emphatically wrong. I can prove i
letters, both from the profession and the general public.

"How can you reconcile the review in question with the
British Medical Journal of Feb. 6th (one of the highest authori
literature in the world):—

"'This is a very *useful book*, full of *sound good sense* and *wise sa*
'The book is *clear*, *concise*, and *well arranged*.' Again: 'The pr
tion, the various causes of indigestion, are described with *perspic*
of expression. Much *sensible advice* is given.'

"Or with the review in *Public Opinion*, one of the leading week

"'To those who suffer from attacks of what is now terme
disease, the appearance of Dr. Dutton's *exhaustive brochure* shoul
welcome.' Again: 'The cause, symptoms, and general treatme
plaint are *skilfully dealt with* in the pages of his volume.'

"All reviews, except the one I am writing about, are in the sa

"I am afraid the reviewer belongs to that conservative class
that does not like medical works written in a popular way, hence
I am sure he does not wish to really injure the work in question,
glad to learn the first edition is nearly sold. I am always care
just criticism when correcting my books.

"I cannot imagine what will be the opinion of the worth of re
who read the *British Medical Journal* as well as The Dubli
Medical Science. I, as a very successful writer on many sub
however, to predict that the work will flourish when time with th
author will be no more.

"I am, with greetings,
"Faithfully yours,
"Thoma

It is a matter of regret to us that Dr. Dutton should take in ill part any criticisms we felt justified in making. We can assure him that our reviewer, far from bearing malice against him, had never even heard of him until he read his book on "Indigestion." Dr. Dutton has been informed by "dozens of letters" that his book is excellent. This is a matter of opinion. Our reviewer, both before and since writing the review complained of, has shown the book to several intelligent non-professional friends, who considered that whether any benefit was to be derived from reading such a work was certainly open to question. The author himself had misgivings as to its reception, for he says, at page 10, "I know this work will not be approved of by some professional brethren."

We are not responsible for the opinion of a work formed by any medical journal or lay periodical other than the DUBLIN JOURNAL OF MEDICAL SCIENCE. We are only responsible to our readers, and it is our duty to give them our candid opinion of books sent to us for review.

We are mere common-place writers, and as journalists have nothing to do with the future, "when time with the reviewer and author will be no more;" so that when Dr. Dutton rises on his prophetic wing and exclaims with Horace, "Exegi monumentum ære perennius," we can follow him no longer.—ED.

CONTAGIOUSNESS OF LEPROSY.

The N. Y. *Medical Record* of 7th November contains a valuable paper on leprosy by a medical missionary stationed in Madura, Southern India, the Rev. Dr. Frank van Allen. We desire here to record his conclusion as to the communicability of the disease about which there was a scare some months ago. "To one," he says, "who has observed leprosy carefully, the opinion must be irresistible that the great majority of the human race are entirely safe though associating daily with lepers." Again:—"It is almost absolutely certain that the great majority of the human race cannot contract the disease by contact however free." He cites the experience of the Madras Leper Hospital which shelters over 250 patients. "Most of these are in a condition to require daily dressing of their ulcers. Three dressers are here employed for this purpose. The dressers use the naked hands in doing this work, handling and rubbing the ulcers most intimately. One dresser has been employed in this work for twelve years, another ten years, and another five years. None of them have contracted the disease." We may add that the Mattei treatment had been tried in three cases:—"They have all become very much emaciated, which is uncommon in leprosy, and notably weakened. One of the patients, however, praises the treatment and announces his wish to resume it as soon as he is able to stand it again, as his sufferings were much less while taking it."

In Memoriam.

JOHN BLYTH, M.D. ST. AND., L.R.C.S.

We leave the beaten track to chronicle with regret the de
old and valued friend in a ripe old age. On Saturday, Ja
1892, Dr. Blyth died at his residence, the Slopes, Ki
Co. Dublin, aged 76 years.

Qualified so far back as 1833, Dr. Blyth spent the
years of his professional life in his native country—
Forty-four years ago, however, he came to Dublin, and
continued to practise until his fatal illness supervened
dismay of a numerous and influential *clientèle* and to the s
a wide circle of friends.

A disciple of Hahnemann throughout his career, Dr
nevertheless was on the best of terms with his more
professional brethren. This was due, in the first place
sound practical knowledge of medicine. He was in eve
a well-educated physician, and had a thorough acquainta
anatomy and pathology. A liberal-minded man, also, h
obtruded his views upon others, while as occasion require
not hesitate to use therapeutical means of the more ordin
if only he was assured that it was for the benefit of his
that he should do so—he was, in a word, an eclectic in
sense of the term.

A thorough gentleman—well read, courteous, dignifi
affable, and kind, Dr. Blyth won for himself hosts of frien
within and without his profession. A man of the utmost
he shed a lustre on every relation of life. And so it happe
as husband, father, friend, he equally is mourned for and
deplored.

THE DUBLIN JOURNAL
OF
MEDICAL SCIENCE.

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A CHAT ON MALT EXTRA

AND

The reason why KEPLER EXTRACT is preferred by t

"MALT as a food has a great future before it." Thus, in 1885,
Dr. MILNER FOTHERGILL, and events have abundantly proved th
prophecy. But although the use of Extracts of Malt has since beco
the results of its employment have too often been disappointing. T
failure may in some instances have been a faulty method of ad
article, but in the great majority of cases it is more probably to be a
the use of a faulty Malt Extract. Dr. MURRELL, in *The Lancet*, has
tract of Malt is of such inestimable value in the treatment of all w
both of children and adults, that any method which will help to sec
ment of good and reliable specimens must of necessity be of intere
in all eleven specimens of Extract of Malt. Of the eleven, there
which under the conditions I have indicated would transform co
starch in thirty minutes, and of these one was more than three ti
the other. Many of the specimens were of very poor quality, and
or no diastasic power." Again, the late Dr. FOTHERGILL, in the A
1881, wrote:—"Some Malt Extracts are raised to the boiling-po
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THE DUBLIN JOURNAL
OF
MEDICAL SCIENCE.

APRIL 1, 1892.

PART I.

ORIGINAL COMMUNICATIONS.

ART. XII.—*Dystocia due to a Cyst in the Liver of a Fœtus.*[a] By WM. S. BAGOT, M.D. Univ. Dubl., L.M., &c.; Ex-Senior Assistant Physician to the Rotunda Hospital.

THE specimen which I have the honour of submitting to the notice of the Academy is, to my mind, one of extreme interest, not only from a pathological, but also from an obstetrical, point of view; for the records of cases where congenital cysts of any size have been found in the liver are very rare, and still rarer are records of uch, or indeed of any tumour of the fœtal liver causing dystocia. The history of the case, from which this specimen was taken, is s follows:—

About 6 a.m. on May 12, 1890, word was brought to me, then Senior Assistant Physician to the Rotunda Hospital, that two of the intern tudents were in attendance on a woman in the Extern Maternity Department. It was her second pregnancy, her first having terminated normally at full time. She had now been in labour thirteen hours. The ead of the child had been born immediately after the arrival of the udents; but the birth of the body was delayed, and, though they had ied both expression and traction, they were unable to complete its elivery. I accordingly hurried to their assistance, and found, as they ad reported, the head, somewhat smaller than normal, completely born, nd the child apparently dead, the delay in the delivery having proved tal. The woman stated that she was about 8½ months pregnant. Her body was covered with a papular eruption of syphiliti could elicit no history of any specific sores having been I then administered chloroform, and proceeded to palpate I found the uterus much larger, and more tense than term, though some of the liquor amnii must have rupture of the membranes, and on percussion a very dist thrill could be obtained.

---

[a] Read before the Section of Obstetrics, Royal Academy of Medicine in Ireland, Friday, Nov. 27th, 1891.

The back of the child could with difficulty be mappe forward, and to the left in the first position. It at on my mind that I had to deal with a case of hydrop plicated by some abnormality of the fœtal abdomen, such an ovarian tumour, &c. Accordingly, after a thorough passed my hand up posteriorly along the anterior surfac and on reaching the uterine cavity, which still contai mally large quantity of liquor amnii, I found, in accor expectations, that the abdomen of the fœtus was en tended and clastic. I now tried to let off as much of the possible, but the attempt met with little success, for th belly of the fœtus filled out the lower uterine segment, act valve. I then perforated the child's abdomen close cartilage by means of a Smellie's scissors, after which a of clear yellow fluid poured out, mixed with the liquor am came away freely. The abdomen having collapsed, I e the child, a male, the placenta following almost immedi great deal of trouble we succeeded in persuading the f present to allow us to remove the child. The husban absent. On reaching the Rotunda Hospital I stitched up by the perforator, and by means of an aspirator filled the which all the fluid had drained away. I had to inject 60 before it assumed its original degree of tension.

The following measurements were then taken:—Lengt cm.; girth at level of umbilicus, 59·75 cm.; distance cartilage to pubes, 39·5 cm.

I then photographed it, unfortunately not very success haste, for the father having returned, and found that the removed, had followed us and demanded its restoration. impossible to pacify him, we hastily performed the autopsy the abdomen it was found that the chief abnormality exist The rest of the viscera were normal, as far as could be a hurried examination of them *in situ*, with the exception which were small. Accordingly we removed the liver a further investigation, and restored the body to the relative

On examining the liver we found the right lobe compar perhaps slightly small, and on the under-surface near th small lobe marked with parallel ridges. The gall bladder was absent, and the lobus quadratus consequently not marked off. Hepatic artery and vena portæ normal. Hepatic duct present, but rather small. It was not possible to trace a branch to the left lobe with any certainty, but it was probable that the left duct was torn from its connections on account of the haste with which the autopsy had to be performed. The duodenal end of the duct was not observed.

The whole of the left lobe was converted into a large simple cyst, capable of containing 48 ounces of fluid. It was smooth on its surface and marked by ramifications of vessels and ducts. The inner surface of the cyst wall was also smooth, except that it was covered by a whitish film, which could easily be stripped off. The fluid from the cyst, having all drained away at the time of perforation, could not be examined. Histologically the hepatic tissue was normal. The wall of the cyst was formed of two layers, about equal in thickness. One next the cavity of the cyst consisted of a rather dense fibrous connective tissue; and outside this, over the greater part of the cyst wall, a layer of equal thickness, consisting of hepatic tissue. Where this is absent, its place is taken by large vessels and ducts. Near the junction of the two layers numerous small ducts could be seen; but these in no case at all approach the cavity of the cyst, they open into the large ducts, mentioned above as accompanying the vessels. No epithelium could be demonstrated lining the interior of the cyst. The kidneys, though very small, were normal in structure.

Now, on referring to the literature on the subject, I can find records of only two cases, which appear to me to bear any points of resemblance to that which I have just described.

The first, reported by Dr. Witzel (*Centralblatt für Gynäkologie*, No. 24, 1880), where he records a case, which occurred in the obstetrical polyclinic of Prof. Gusserow. During the summer semestrium Dr. Witzel observed a woman, aged thirty-six years, who was in labour. It was her second pregnancy. Some years previously she had borne a normal child at full term. The midwife not being able to determine the presentation, sent for his assistance. External examination showed that there existed a longitudinal lie of the child, and he could feel on the left side a rounded part; but above the symphysis pubis no hard tumour corresponding to the head could be found; accordingly he thought it was most probably a breech presentation. On examining *per vaginam* he found a soft part, and towards the left a pedunculated sac, bigger than a walnut. Behind this there was an opening, into which the tip of the finger could be put. On one side of this

opening he could feel a resistant ridge, and behind thi
covered by soft parts. He consequently diagnosticatec
position of the breech. No progress was made in the
the next eighteen hours. After this, owing to some
the child was born so far that a malformed head w
vulva. While the patient's husband was bringing
Witzel, a neighbouring doctor was called in, who t
delivery by pulling on the head till he lacerated the
the neck as deeply as the spine, and almost complet
one arm. Dr. Witzel, on his arrival, seeing the ma
the head, made further examination with the patier
roform. He could still feel the rounded part in the
uterus; it seemed to correspond to a second head.
examining *per vaginam*, and passing up his hand, l
this was in reality the short legs lying close to one ar
could feel the belly blown out like a balloon.
decided to perforate it. Upon this being done, t
yellow fluid poured away, and the child was then easi

The examination of the child showed the followin

Rudimentary external female genitals.

Thick short upper extremities, with six fingers c
and rudiment of a seventh on the left.

Six toes on each foot; genu varum and pes v
extremities; hemicephalous, greater part of the skull
presenting pedunculated membranous sac; palpebral
orbits small; no eyeballs; nose flat; complete abse
maxillary bone; situs inversus viscerum totalis; cy
left lobe being, with the exception of a small portion c
margin, completely converted into a cyst with irre
This cyst communicated by an opening, admittin
with a smaller one in the right lobe; the other lobes
the gall-bladder was empty. The cystic duct was s
common duct, which opened into the cyst in the r
dilated to the thickness of one's thumb, and ended b
the duodenum; but in the duodenum the usual pa
made out. There was a Meckel's diverticulum. Ea
the size of a man's fist, and cystic, with small cyst
pea; the ureters were not dilated; the bladder was e
existed other malformations, which I need not delay

The second case, reported by Lomer (*Virchow's*
think worthy of note from the fact that the fœtus p

of congenital syphilis, though the cystic liver did not cause any obstacle to delivery.

Here there was obliteration of the cystic and right hepatic ducts. The gall-bladder was collapsed and obliterated; the left lobe of the liver was normal; the right lobe was rough, convoluted, like a brain, and degenerated, with cysts in it; a smooth cyst projected from the surface of the liver; it was the size of a cherry, and communicated with other cysts in this mass of scar tissue; the left duct, the hepatic artery, and the vena portæ were normal; the cysts contained a yellow fluid; the fœtus was macerated, and its bones presented syphilitic lesions. Lomer considered the malformation to be due to a primary developmental defect, or else to syphilitic perihepatitis.

Turning now to the obstetrical bearing of this case, which, though not of such general interest, is none the less of great importance, I find that the records of cases where tumours of the liver have acted as obstacles to delivery are extremely few. Winkel, in his "Text-Book of Obstetrics," one of the most recent and complete works on the subject, states that "the description of those tumours of the liver, which have been causes of delay in or obstacles to delivery, is somewhat defective." He mentions records of four cases—viz., (1) Haase (N. Z. XI., 262); (2) Müller (Hohl, p. 286); (3) Nöggerath (Deutsche Klinik, 1854, No. 44; Wochenschr. IV., 458); (4) Schlesinger (Hohl, p. 289). The first three, according to Winkel, "resolve themselves into either hepatic [illegible]sconia, or a lymphatic tumour of the liver." In Nöggerath's case the liver was the seat of a congenital carcinoma, and weighed [illegible] lbs; it measured 8·75 inches in width, 3 inches in thickness, and 6 inches in height. The liver in Müller's case, a lymphatic tumour, weighed 4 lbs. These four cases, together with Witzel's, which has been overlooked by Winkel, and the case which I now report, would amount to but five cases in which I have been able to find records of any obstacle being offered to delivery by a tumour of the liver. The head of the child presented in all the cases, with the exception of that reported by Haase. In it the fœtus presented obliquely, with the head towards the left, and the cord and left arm prolapsed. The liver in this case weighed one pound. The child was a girl, 19·5 inches long, and 9 lbs. in weight.

ART. XIII.—*A Case of Opium-Poisoning.*[a] By JO F.R.C.S.I., L.R.C.P.I.; late Assistant Surge Hospital, Dublin.

WHEN we consider that opium and its alkaloid is quently used drug in medical practice, and when one hand, the idiosyncrasy which some have for its and, on the other, the facility with which the gene procure from any chemist large quantities of th must be astonished at the comparatively few case which are reported.

Laudanum is sold to any adult person by the a vided he gives a satisfactory explanation there and he intends to make of it. Although it is out of t this paper to enter into the legal question of the sal to suggest a remedy, still I feel bound to allude to highly dangerous to society which puts into the ha somaniac or melancholiac an instrument capable of disastrous consequences.

The case I am now going to bring before the notice is one of acute poisoning by opium, and I would n time of the Academy were I not convinced that the to be learned from the details of treament in each c and that we may profit by each other's experienc be prepared when called on, as each one of us may of the day or night, to take up charge of a similar

CASE.—A. B., aged thirty years, of good physique, habits, was observed by a servant to drink a two-ounc ful of laudanum at 11 p.m. on the night of the 18th of The servant informed the husband a few minutes after disinclined at first to believe the statement, but about after the supposed time of his wife's swallowing the l she became drowsy, he called in the assistance of a medi was living in the house.

I now insert the account of this gentleman :—

"My attention was called to A. B., after being in drunk two ounces of laudanum. I found her in the f tion—a marked condition of drowsiness with contracted p I could see from her appearance she had evidently ta some extent, I was not inclined to believe she had t quantity as the servant represented. So I got some strong tea prepared and made her swallow, after some persuasion, about half a pint of the infusion. A. B. was at this time walking about in a somewhat dazed condition. After taking the tea she retired to bed, but, not feeling easy regarding her, I remained in my room reading. About 1 a.m. the husband came down in a state of alarm, saying she was in a deep sleep, from which he had been unable to arouse her by shaking or calling her by name. I found her lying, as he described, in a condition of sleep, with slow and stertorous breathing. After some difficulty I succeeded in arousing her, but on discontinuing my efforts she again sank into the same lethargic condition. When aroused she was just able to say, 'Please, let me sleep.' Her breath smelled of laudanum. Her pupils were contracted to an extreme degree, giving the eyes a peculiar appearance. With her husband's assistance, each of us taking an arm, we forced the patient to walk up and down the room. I endeavoured to make her swallow some ether, but without avail. At last, seeing she grew worse in spite of my efforts, and her husband, who had been assisting me in the attempt to arouse her, now completely broke down, thus leaving me to my own resources, I sent him for medical assistance, while I continued to force her up and down the room, dragging her the greater part of the time, despite which she rapidly sank into a comatose condition."

---

[a] Read before the Medical Sect[illegible]f the Royal Academy of M on Friday, March 11, 1892. [For [illegible]cussion on this paper, see

I saw the patient at 3 a.m. She was then in a collapsed condition. Efforts had been made to keep her walking, which at that time consisted of dragging her across the room, as the power of motion seemed completely gone. She was still capable of being roused by slapping her face and chest with a wet towel, but in another second she sank into a comatose sleep. Her pupils were veritable pinholes; her breath gasping; pulse imperceptible; surface of the body cold.

I had hardly entered the room when her breathing ceased. All our efforts could not arouse consciousness, and life appeared extinct. Seeing she was too far gone to use the stomach-pump, not having any atropin with me, I at once started artificial respiration, getting the medical gentleman who was there to inflate her lungs. We gave her hypodermics of ether and enemata of brandy and tea.

After two hours' hard work she became slightly conscious, was able to speak a few words, and to swallow some tea.

I then passed a catheter, and drew off a pint and a half of urine, which distinctly smelled of laudanum. This was, however, a brief respite. Although we did all we could, in a few minutes she again sank into a comatose condition. I then tried cold affusion to her head, and continued the artificial respiration, with hot jars to her feet, axillæ, thighs, and sinapisms to her legs, epigastrium, and, I might say, everywhere.

The enemata of brandy and tea with the hypodermics of ether were administered by either of us when the other was working the artificial

respiration. Our efforts did not produce any effect;
then a gasp there was no sign of life.

At 7 a.m. I inserted hypodermically $\frac{1}{100}$ grain sulph
a second injection fifteen minutes afterwards; a third i
and a fourth in thirty minutes afterwards. Her conditi
the atropin was—1. An attempt at respiration, due, I bel
means; 2. An imperceptible pulse; 3. A dry skin; 4.
dilated, which was due to the failure of her vital power.
I firmly believe, as you shall see from the subsequent hist

She was seen at 9 a.m. by the late Dr. Corley and Prof
The outlook was very bad. Dr. Corley was inclined to
no use continuing, but I determined as long as there was
of life to do all I could, hoping that a certain amount of t
be eliminated by the kidneys if we could keep her alive

We continued the artificial respiration, and gave ano
of atropin at 12. The patient's condition then was the s
an occasional feeble effort at respiration.

At 1 p.m. I thought all was over; her lower jaw dropp
at respiration ceased. I was on the point of giving up
bered I had sent for a magneto-electric machine early
Getting one pole over the back of the neck and the othe
region, I set the current working. After what appeare
heard a gasp, followed by a second. This gave me new
menced again the artificial respiration. The current a
set the respiratory apparatus working, as the feeble respir
until 2 p.m., when the same happened—the face, which
pale, became dusky; the eyes open with dilated pupils
jaw dropping, while all respiration had ceased.

After the last success with the electricity I did not des
one pole over the epigastrium, and the other to the nap
turned on the current. The gasping respiration again
getting my assistant to follow each effort with the arms
head, I kept the current on for twenty minutes. At that
respirations became for the first regular, four to the mi
lest the electrical stimulus might be exhausted, we agai
artificial respiration alone. For two hours the respirat
very feeble, but regular.

At 4 p.m., greatly to our joy, they rose to 8 per minu
gradually stronger until 5 30, when, the breathing
minute, the conjunctival reflex appeared, and artificial
fourteen hours, was stopped.

Later on the patient was able to take nourishment; th
to light. I left her at 2 a.m. under the care of a nurse,
to awaken her every hour and give her some hot milk.

The further history of the case is of no interest. She suffered some trouble from abscesses after the ether injections; but when I saw her some weeks ago—nearly four years after that memorable night—she was in perfect health.

I wish to draw your attention in reference to the above case to the following points:—

As to the quantity taken, we found out afterwards it was three ounces—that is, 99 grains—of opium. This we discovered by comparing the known quantity of laudanum which was in the bottle at 10 p.m. with what we found there in the morning, no one having access to the room where it was left in the meanwhile. The difference was about three ounces. This bears out the servant's statement as to having seen the patient drink a two-ounce measure full of laudanum. An ordinary two-ounce measure, as you know, when filled to the brim contains about three and a half ounces.

I am aware that much larger doses of opium have been recovered from. In "Guy's Hospital Reports" it is mentioned that a patient took five ounces of laudanum without producing the slightest poisonous effects. Dr. Bowstead, of Wycombe Regis, reports a very remarkable case of recovery in a lady who had drunk eight ounces of laudanum and was not seen until fourteen hours after the poison had been taken, owing to her having locked herself in her bedroom. There are other cases reported of recoveries from similar quantities.

But when we come to cases in which the medical man who attended was able to ascertain for himself the amount taken without any source of error, and compare them with the former accounts in which hearsay evidence of the patient's friends was taken, we must be struck with the fatal results in comparatively small quantities.

Amongst many cases I will merely instance one recorded by the ate Mr. Kirby, in which the fatal dose was one ounce; and a second, by Dr. Cleveland, of Maida Vale, where, although the young man was seen almost immediately after swallowing two ounces of Battley, his stomach washed out, and all the other aids ried, the case became rapidly fatal.

One peculiar thing about my case was that there was no vomitng, which generally follows so large a quantity of laudanum taken at once.

I may here remark the patient was, from all I could ascertain,

not given to taking the drug. She had once or tw
of it, about 20 minims, prescribed for some dyspeptic
there is no doubt she took a very large poisonous
not previously tolerant of opium.

The next point is the secondary asphyxia of opi
which occurred here, you may remember, after two h
respiration. Six hours after the poison was taken
consciousness and was able to speak, but in a few
again.

This is a condition I find referred to without an
being given in Taylor's book on Poisons; and on lo
literature I find this was a very bad symptom, nearl
it was present in died. The late Mr. Kirby, of this ci
the case of a lady who recovered after fourteen hour
speak to those around her, but suddenly became unc
died four hours afterwards.

I would venture to suggest that this depends on
absorption. The first quantity taken into the syste
lysing effect, so that when the condition improved a
poison which remained in the stomach was taken up.

As to the treatment, there is no doubt that the sto
have been at once washed out when the first sympto
It was the uncertainty of the quantity which kept t
the patient from sending at once. When I arrived it
for three reasons:—

1. Her respiration had stopped.
2. Probably the greater part of the laudanum was
3. The danger was from the opium in her blood, n
remained unabsorbed.

Next as to cold douching; this, I believe, did mor
good. I would only employ it when there is a moder
warm skin, and not in a collapsed condition like the p

The atropin was of no avail, and had no effect e
heart or respiration. In fact, the respiration was w
use.

In my opinion this patient owes her life to three th

1. The artificial respiration continued for fourteen
2. The interrupted current, without which the first
I believe, failed.
3. The ether with enema, which latter, getting so
the system, caused a certain amount of diuresis.

In conclusion, I would beg to point out, from the extreme hopeless nature of this case, that we ought to be very slow to give up a case of opium-poisoning if there is the faintest sign of life, and even when that appears extinct, not to discontinue our efforts for at least twenty minutes after apparent death.

ART. XIV.—*The Position of Dispensary Medical Officers in Ireland, and Suggestions for the Removal of their just Grievances.*[a]

By THOMAS DONNELLY, M.D., M.A.O. Univ. Dubl.; F.R.C.S.I.; Assistant Physician, House of Industry Hospitals, Dublin.

THE subject I venture to bring under your notice is one specially suited for discussion by the State Medicine Section of this Academy, because the dispensary medical officers of Ireland are *ex-officio* medical officers of health in their respective districts.

At present the dispensary medical officers are taking advantage of the opportunities offered by the press to ventilate their grievances and bring under the notice of the Government suggestions for the removal of the most glaring injustices from which they suffer.

As you are doubtless aware, the Irish Medical Association, the British Medical Association, and also associations throughout the country, are acting vigorously for this object. It would, indeed, be strange and impolitic for this Academy, which embraces the profession in Ireland as a whole, not to elicit the views of its members, and by suggestions assist those who are intrusted with drafting the bill to be laid before Parliament at an early date.

Having been medical officer to a country district for nearly two years and to a city district for almost eight years, as well as being assistant physician to one of the largest clinical hospitals in Ireland, I have had opportunities from this varied experience of observing the working of medical charities from many points of view.

Many laymen and, I am sorry to say, a few members of our profession, speak of and act towards dispensary doctors as if the latter did not belong to the guild of medicine, but were a separate and distinct body of public servants.

To dispel this curious illusion, and bring about more harmonious action of the profession in the relief of human suffering, I shall endeavour to put the position of the dispensary medic his public capacity before you in as few words as possib so I must first explain that the present system of ad medical relief in hospitals as well as poor law dispen which latter only I shall now deal, is unjust—first to sion as a whole, and secondly to the medical officer.

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[a] Read in Section of State Medicine of the Royal Academy of Medicine in Ireland, Thursday, March 3, 1892. [For the discussion on this paper see page 330.]

First, as regards the whole profession. You all know of the most eminent members of our guild began life as doctors, and at the present time many earnest, able highly distinguished men are in the poor law service. is not the *personnel* that is to blame for the position h medical officers in the estimation of the public. It is pally to the indiscriminate issue of medical relief tick sponsible persons to those not entitled to relief at all. and advice are marketable, so that the public value the things, at the price that must be paid for their use. dispensary doctor in his own district, because his servi obtained for nothing by almost every person in his dist in lower repute than he is elsewhere, or would be the honest persons were not permitted to take advantage intended for the poor. Now, the profession at large in reputation by the lowering of the status of 848 ful members thereof. Every member of the profession l indirectly also, because the dispensary doctor is frequen to attend cases gratuitously that should, and would, either to the medical officer in his private capacity or practitioner.

With the object of making this clear I will relate tw of a great number that I can vouch are true and not ex One day a respectable-looking person presented a blac a dispensary for advice and medicine, which ticket wa in the following way. In the course of conversation with a warden, who kept a shop, she mentioned that she was care of Dr. ——, to whom she was paying five shilling He spoke in the highest terms of the dispensary c recommended her to consult the latter, adding that it her nothing, as he had tickets, one of which he then Was that fair to the medical officer or just to the pra in other words, the profession?

On another occasion the dispensary doctor got a re visit an old lady, whose appearance and surrounding the reverse of destitution. He prescribed for the old lady, at the same time informing her that his duty as medical officer was with the poor, and endeavoured by his manner to indicate that he did not consider her an object of charity. Before leaving he requested her to acquaint him at the dispensary if she did not get better, so that he might again visit her. She did not subsequently communicate with him, so that he did not visit her any more. Some time afterwards another doctor informed the medical officer that he attended the same old lady, who was possessed of a considerable sum of money in the funds and other securities. This shrewd physician demanded double the amount he expected her to pay, thinking that the old lady would be pleased at cutting down his fee. To his astonishment she paid him forthwith, and was profuse in her expressions of gratitude for his kindness. He attended her for about a year, during which time he received over £35 in fees from her. She had also been paying for medical attendance before she sent the red ticket for the dispensary doctor.

I could multiply instances where the profession as a whole loses money by the abuse of medical relief, but doubtless in the discussion which, I trust, this paper will give rise to, many cases of imposition will be mentioned by the dispensary medical officers present which will prove very clearly the necessity that exists for some means being taken to protect the profession from the lowering of its status and loss of money. I trust that I have shown that it is the interest of us all to join hands in the endeavour now being made to prevent the abuse of medical relief.

Secondly, the system is very unjust to the conscientious, able medical officer, because the better he knows and does his duty the more work is thrown on his shoulders without increase of remuneration. This will appear quite plain from the following, which happens to be the case at present in two adjoining country districts with which I am acquainted:—

Dr. A., an able, conscientious M.D., who does his work well and has earned a good reputation in his district, has a large, laborious practice, for which he receives £125 per annum.

Mr. B., his neighbour, a doubly qualified licentiate, has a very indifferent reputation, but fortunately has private means, receives the same salary, £125 per annum for merely attending for an hour or so at the dispensary twice a week. Is it just that these two men should have the same salary?

I have been credibly informed of the following case, which occurred in the country:—Dr. C. had been attendin for some time on a red ticket, when one day he met hi and friend Dr. D. at the patient's house. Dr. D. exp prise at meeting his neighbour there on a red ticket, a him that he received £2 for the visit, and was not a C.'s attendance. Now Dr. C. did not receive a fee at a the patient could afford to pay Dr. D., also a dispens £2 for one visit, simply because it was possible to pr ticket for Dr. C., and the patient wished to save some was ingenuously told to myself on one occasion.

The injustice to the profession is greater in city tickets are issued by irresponsible shop assistants indis whereby many practitioners who would be satisfied w fee are deprived thereof, as I have already shown. O great number of patients, and the tricks and devices in many cases, it is only after some time that the doctor becomes aware of the imposition. Of course the fraud is not detected at all.

It may be said, why not get improperly issued ticket Some do try this, the only legal method of preventing per issue of tickets, but, I fear, with indifferent su feels chary about asking to have tickets cancelled reasons:—

1. The attendance may have ceased before the patie stances become known to the doctor, who feels that unkind to pry into the affairs of perhaps very respecta poor, people.

2. The *onus probandi* is thrown on the doctor, wh unfair. As you all know, it is very difficult to extrac dence from unwilling rogues. Hence he prefers to s doubtful fee and avoid wasting time in making inquirie

3. The tribunal to which he must appeal is comp very men who issue the tickets or allow them to be iss he asks a body to pass a vote of censure on its ow which naturally it would, if possible, refrain from doin

The public never seem to consider the anxiety an medical officer suffers from, or that he is responsibl call that may be made on him at any hour, day or ni the entire year. If he takes a holiday he must prov his substitute, unless he produces a medical certifica or temporary incapacity. This expense, in conjunctio loss of his private practice, prevents many taking a holiday for years, and some in very poor districts could not afford to go away even if offered a temporary respite from duty.

When a medical officer becomes debilitated from old age or overwork he is afraid to resign, lest the guardians refuse to give him a pension, which they may or may not, most likely not, vote to him. The result, of course, is appalling cruelty to the medical officer and the poor entrusted to his care in cases, not very infrequent, where octogenarians and others suffering from incurable maladies struggle to do their duty, until Mors mercifully relieves them from torture inflicted on them by the working of a system which is supposed to be for the relief of suffering humanity.

So much has been written lately in the journals on this subject that it is unnecessary for me to trespass further on your patience by the recital of all the grievances from which the Irish dispensary doctor suffers, and shall conclude by mentioning what appears to me most urgently required in the relative order of importance.

1. Legal definition of a "poor person." A list of poor people entitled to medical relief made out annually by the clerk of the union, and forwarded to those entrusted with the issue of tickets.

2. Power to issue tickets to be given to responsible persons only.

3. A more simple and direct method of cancelling improperly issued tickets.

4. A salary of £200 per annum in towns where daily attendance at the dispensary is required; and £100 per annum in country districts, as attendance twice a week is in nearly all places sufficient. In addition to the above a mileage fee of 1s. per mile be paid on all visiting tickets, in order to have the remuneration vary in proportion to the work done and prevent unnecessary visits.

5. Pensions at the civil service rate after twenty years' service. Resignation to be voluntary with the medical officer up to 65 years of age, after which age retirement to be compulsory.

6. A proper residence, with dispensary and stabling, &c., attached, should be provided and maintained by the guardians for the medical officer free of rent and taxes so long as he continues in the service.

7. Dispensary doctors should be *ex-officio* medical officers to the workhouse hospitals of their districts, and should do duty there for at least a month at a time in rotation. This is more requisite in country than in city districts.

8. Thirty days' annual holiday should be granted of *bonâ fide* sick leave.

On Wednesday, February 17th, 1892, resolutions at a conference held in the Royal College of Surgeons. my entire approval as far as they go, but I think th an annual holiday, proper residence, and provision fo at the workhouse hospitals, are very much to be regr

In conclusion, I think it would be most desirable service altogether remodelled, and a State departmen which would embrace all public medical and allied sufficient salary to enable the medical officer to live in of private practice, and free from the control of local and others. This, however, I fear, is utopian.

ART. XV.—*The Residential Disabilities of Medica* *Rural Districts.*[a] By P. M. LAFFAN, Medical Off Co. Meath.

I WILL endeavour in this paper to put before you b the principal obstacles that prevents the erection of dences more numerously throughout Ireland—namely, able defects of the "Dispensary Houses Act, 1879."

Until this parody on constructive wisdom receive tary sanction, one of the great disabilities under w officers laboured was the difficulty—I might say, rathe sibility—of procuring a proper residence in a centra their respective districts. Many had to live in most parts of their areas, and several had to occupy wretche and wholly unsuitable houses.

The following is one of many illustrations that can b Several years ago a medical man was appointed to an adjoining county. He was facetiously made to reside in the centre of the district, though there was to be had in any part of it. With much difficulty, a out considerable pressure having been brought to clergyman of the parish, he got one room in an house on the side of the road. Here he resided for and then succeeded in getting the tenancy of a capacio which was suitable enough only that it was so far situated from the central cross-roads that it increased the number of miles to be annually travelled by nearly 700. Even so, he would have continued to live in it, as he had done for several years, but the owner requiring it for his own use some time ago, he again had to go back to the one room, where, still worse, the family were now unable to accommodate him for more than a fortnight. He then applied to the guardians for a labourer's cottage *pro tem.*, which they granted; but this concession was subsequently refused by the Local Government Board, as they considered it would be illegal to make any other use of those cottages than that for which they were originally intended. The medical officer, being on the horns of a dilemma, began to make arrangements for a wooden hut, when a kind-hearted gentleman in the neighbourhood, who partially resided in Dublin during the winter months, gave him accommodation in his castle until the ensuing summer. He was then promoted to the village publichouse, where he is now enjoying his *otium cum dignitate.*

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[a] Read, by permission, before the State Medicine Section of the of Medicine in Ireland, on Thursday, March 3, 1892. [For the di paper see page 330.]

There were, I am sure, many similar cases of great hardship throughout the country, and I know that in towns also medical men have often to encounter no small difficulties in getting fairly good houses.

Now, you may reasonably ask has not all this been remedied by the Dispensary Houses Act of 1879? I regret to say only to a moderate extent, in consequence of its malconstruction and many practical defects, the principal of which are:—

1st. It contains no clause, like the Labourers Act, for the compulsory acquisition of land, and the result is that some boards of guardians, though quite willing, have been unable to build dispen-ary residences owing to the difficulties of procuring sites. As the committee, even when eligible sites are available, can take only what is voluntarily offered, they are powerless to select a central position, and are, therefore, debarred from taking into consideration he requirements of the districts or the convenience of the medical officer from a geographical or population standpoint.

2nd. The rate of repayment at 5 per cent. is too high, and is found to entail an annual loss to the union for 35 years, unless a ery small structure be erected or an unreasonable rent be put on he tenant. This the guardians, in the interests of the ratepayers, aturally object to, and, consequently, many boards are inclined to helve altogether, or to let die from inanition, applications for the erection of dispensary residences. I need not remin under the Land Acts money is lent on a lower scale, advances for a public purpose ought to be made not a equality, but on still more advantageous terms than th the State to facilitate bargains between private individ

3rd. The principal defect of the Act, and the one wh most instrumental in militating against its success, is the 11th section of it—namely, a prohibition from tak lease of the selected site than 60 years. I know not was done—which is not probable—to indirectly bring the guardians to purchase rather than take a lease, or merely a clerical error of the draughtsman of the escaped the observation of the hon. members towards the of the morning when they were weary from legislative t of repose. Be that, however, as it may, there is one t that this unfortunate and ridiculous restriction has bee of occasioning delays, often for several years togeth enormous expenditure in the way of law costs, as th were by it compelled to purchase the fee, necessitating le and other expensive methods of proceeding, which coul avoided if they were empowered to accept long leas paratively simple and cheap mode of acquiring land. M that might with advantage be spent on the buildin wasted in another direction. The following is a striki tion of this:—

The committee of one of the districts of a union agre much-needed residence for their medical officer, and lo for a site. They could have easily obtained severa varying from 60 to 999 years, containing the full qu acres—permitted by the Act, but as they thought it w a good business arrangement to expend a large amount term, they decided to procure the fee-simple of anoth it happened that in the whole neighbourhood there w piece of land that could be obtained on that tenure. about the price with the legal representative of the repu but when the title came to be investigated it was disc there was a plurality of ownership and almost endless co besides; furthermore, those in whom the estate veste available for the execution of the deed of assignme them was fishing in Norway, another ranching in th States of America, and a third trying to regain lost southern clime. The rest—and there were seven altogether—were scattered over Great Britain. The result of this untoward state of affairs was that the law costs amounted to over £150, and that the house was not completed for five years from the time the matter was first initiated, and the quantity of land that entailed all this waste of time and money did not exceed *one* acre, though, as previously mentioned, the committee could have obtained sites containing the full five acres on leases of 99 years or more at much smaller expense did the section permit them to so accept.

Another case exemplifying how severely handicapped the guardians and medical officers are by the limitation clause occurred quite recently. A certain board having disagreed with the head landlady as to the amount of purchase, entered into negotiations with the next in title—the representative under a fee-farm grant—took a 60 years' lease; and when the matter was put into the solicitor's hands the grantee, a generous lady, offered to give a lease for 999 years without any additional charge, which, by reason of the clause, the guardians were unfortunately precluded from accepting.

This last instance strongly emphasises the need that exists for retrospective legislation should the 11th section be rectified, so that in those cases where the guardians have already built on lands taken under the short tenure they will get the benefit of the corrections that will be made in the Act, thus enabling them to accept a lengthened lease in lieu of the comparatively short period of 60 years.

I will also direct your attention to another of the faults of the Dwelling Houses Act—namely, the omission from it of any section conferring legal authority upon boards of guardians to entertain the applications of workhouse medical officers in cases where those officers have been unable to rent suitable residences within convenient distances of their hospitals.

In conclusion, I would suggest:—

1st. That the Act be amended so that the guardians may take, subject to such exceptions as may be determined on, land by *compulsion*, for the erection of dispensaries and dwellinghouses for medical officers.

2nd. That the percentage charged by the Board of Works on the loans for building those residences be reduced to the minimum at which the State can lend money without financial loss by the

repayment being extended over a more lengthened s
than is at present permitted.

3rd. That section 11 be altered so as to ena
guardians to take land on longer leases than the s
period of 60 years only now by this Act allowed,
the expenses and complications incidental to the a
fee-simple property, for which latter the constructi
in its present form necessitates a preference.

4th. That this clause be made retrospective, so tha
contracts may be brought within its scope.

5th. That medical officers of workhouses be ad
benefits of the new Act, the boards of guardians b
with the powers and functions which are now di
them and the dispensary committees.

6th. That boards of guardians and "owners"
present indebted to the Commissioners of Public Wo
existing Act, be allowed, should there be a revisi
adjustment of their contract with the latter body,
enable them to obtain the advantages of whatev
Parliament may be pleased to grant in the way of
annual rent-charge by the extension of the time f
the loans.

I am convinced that if the defects touched upo
prominently forward and pressure actively exercised
quarter, especially if supported by the weight and
this great Academic Institute, it will not fail in the
be productive of an amelioration of the Act that will
with progress and expediency.

Art. XVI.—*A Case of Recurrent Enteric Fever, fol* *Relapse.*[a] By John William Moore, M.D.,
F.R.C.P.I.; Physician to the Meath Hospital, Du

The present "Clinical Record" may well claim the
physicians, inasmuch as it refers to a case in which
enteric fever recur in the same patient, but the rec
was succeeded by a true relapse after an apyrexial pe
or twelve days.

In April, 1877, I attended with the late Dr. Al and Sir George Owens, a lad of fifteen years, who passed through a typical attack of enteric fever lasting 23 days—in which, however, constipation and not diarrhœa was the rule. In October, 1891, the same gentleman, at the age of twenty-nine, sickened of a fever which proved to be undoubted enteric fever. After running an acute course of 24 days, followed by a subfebrile period extending over another week, this attack was succeeded by convalescence, which seemed to be in all respects normal. On the eleventh or twelfth day, however, from the establishment of apyrexia, acute febrile symptoms again showed themselves, and for the third time in his life the patient passed through an attack of enteric fever.

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[a] Read before the Medical Section of the Royal Academy of Me
on Friday, February 5, 1892. [For the discussion on this paper see

The salient points are of course only given in the foregoing brief statement. The facts are as follows:—

Case.—In April, 1877, W. H. P., a schoolboy, aged fifteen, was staying in the Co. Wexford, where he slept in a room situated near an offensive manure-heap. To this the patient himself attributed his illness, which began on Thursday, April 19, with a feeling of nausea at school. He returned home and went to bed. He at once lost all appetite, the sickness continued, but without vomiting. The following day diarrhœa set in after a dose of effervescing magnesia; this was in turn succeeded by constipation.

On Tuesday, April 24 (6th day), he was seen by Dr. Hudson, Sir George Owens, and myself. At 1 30 p.m.—pulse 94, resp. 34, temp. 103·3°. His tongue was furred, but moist; some sordes clung to the teeth. He was perspiring freely; there was no abdominal tenderness. Next day rose-spots appeared, and the fever ran very high, the thermometer marking 103·7° in the axilla at 6 p.m. At this time he was on an exclusively milk diet, and the bowels were obstinately confined.

On April 28th (10th day) I took this note at 6 p.m.:—"Has been more prostrate this afternooon—P. 86, Resp. 34, T. 102·7°. To have chicken-broth, claret, and this mixture:—

℞. Extracti Cinchonæ Liquidi. ʒii;
Acid. Hydrochlorici diluti, ʒii;
Tincturæ Cardamom. Comp., ℥ss;
Aquæ Chloroformi, ad ℥vi.
M. ft. mist. Signetur: Half an ounce three times a day."

On April 29 (11th day) the state of the patient was still less satisfactory—the tongue was drier and browner, more sordes had gathered on the teeth and gums; there was an icteroid tinge of the surface. He had not passed water since 8 p.m. of the previous day. The belly was fuller and more tympanitic; the area of splenic dulness was increased. Many

rose-spots were seen on the chest, abdomen, and arms. T
points about the patient were that he had slept well, and
tion, and temperature were all falling uniformly. At 3 p.
and uncomfortable, owing to inaction of the bowels and
urine. I gave a large warm water enema, when quantitie
fluid fæces came away, and he passed water freely twice.
was much coated at this time, and the papillæ were enlarg

On May 2 (14th day) the temperature rose to 103·4
following day, after 4½ hours' continuous sleep, the urin
dark-coloured and of high density (sp. gr. 1025), began t
copious deposits of urates. This occurrence was manifestl
of a crisis, for the patient's state improved daily hencefor
it was not until May 12th (24th day) that I was able to n
in my notes, "No fresh rose-spots." A period of subnor
temperature readings now followed—the pulse falling to
minute, and the temperature to 96·5° on May 20th (32n
days previously I had made this entry—"Slept well,
morning," not a bad sign of convalescence in a school-boy.

Soon after this the patient went to Cauterets in the Py
his health was happily quite restored.

October 15, 1891.—On this day Mr. W. H. P., aged twe
a barrister by profession, left Dublin apparently in good heal
visit to a country house in one of the midland counties of
returned on Thursday, Oct. 22nd, and two days later, in th
first complained of feeling unwell. From this statement I
Mr. P. probably contracted the fever in his town reside
went on a visit—the most usual length of the period of
enteric fever being a fortnight or thereabouts.

On Sunday, October 25th, the patient awoke with a st
slight headache. Next day he went out, although feeling
the afternoon sat over the fire owing to an unconquera
On Tuesday, the 27th, he was utterly unable to leave his b
the next three days in bed, attended by Dr. L. H. Ormsby,
morning temperatures 100°, his evening temperatures 10
higher. Feeling rather better on Friday, the 30th—when
and evening temperatures were 98·5°—he got up at 3 30 p
an arm-chair at the fire, feeling very weak. At 7 p.m. he
on buttered toast for dinner, after which he spent a restless
by the morning the temperature had risen to 101°, rema
point throughout the day. I saw him with Dr. Ormsby in
and came to the opinion that the attack had probably aris
fatigue in the country and indigestion. Having a vivid
his enteric fever 14½ years previously, I put aside the thoug
the malady from which he was now suffering.

At 9 a.m. next morning (November 1) the temperature was 104°, the patient was coughing frequently, especially whenever he lay on his right side. He brought up mucous sputa, occasionally streaked (not tinged) with blood. Diarrhœa now set in—five motions of the colour and consistence of pea-soup occurred in the 24 hours ending at 9 a.m. of November 2, when the temperature was 103°. Shortly afterwards it rose to 103·7°, with a pulse-rate of 104, and respirations 30 to 32. He was ordered to be sponged in the morning, afternoon, and evening, and at midnight, while milk and lime-water, and chicken jelly, followed by crushed ice, were given alternately.

November 3 (11th day).—Rose-spots are visible to-day, both on the abdomen and on the back. The patient's dietary now consisted of 3 ozs. of boiled milk with 1 oz. of lime-water every third hour, and 2 ozs. of chicken jelly every sixth hour. Two turpentine capsules (containing 10 minims) were given every fourth, and a three-grain quinine pill every eighth hour. Crushed ice was allowed freely, and the tepid sponging was carried out as before.

November 4 (12th day).—Increasing bronchial trouble was treated by the free application of compound camphor liniment to the back and front of the chest, which was then enveloped in cotton wool, previously well warmed. The hip, back, knees, and other parts exposed to pressure were rubbed with spirit of camphor night and morning, and then dusted with "violet powder."

November 5 (13th day).—Temp. 103°. The only change in the treatment was to add one ounce of beef tea to each meal of chicken jelly.

November 6 (14th day).—Evidences of serious heart-failure now presented themselves. The cardiac sounds were weaker. The heart changed its position easily—when the patient turned from side to side, the heart "sagged" over to the dependent side. The area of pre-cordial dulness had increased laterally, and the radial pulse failed when the arm was held aloft. The patient spent a very restless night. Morning temperature, 103·2°. One ounce of brandy was given in teaspoonful doses during the day.

November 7.—A complaint of pain in the abdomen was met by the application of turpentine fomentations.

November 9.—We found the patient weak after a restless night, with some delirium. Ordered to have food every hour—either one ounce of hot milk with a teaspoonful of brandy, or 1½ ozs. of mixed chicken jelly and beef tea with 2 teaspoonfuls of Brand's essence, washed down by half an ounce of old port.

On November 13 (21st day), rennet was ordered for a change, as the bowels were rather constipated.

November 15.—The yolk of an egg was put into a cup of tea morning and evening.

During the following few days enemata were administered constipation. On November 20 rusk was broken into the be dietary now was:—A cup of tea and yolk of an egg at 9 a beef tea at 11 a.m., a cup of custard at 1 p.m., a cup of ren a cup of tea and egg at 5 30, a cup of beef tea at 8 p.m., and the night, if awake.

November 22.—Sat up for a few minutes while bed seemed wonderfully strong.

November 24.—Got thin bread and butter without cr and evening, with cup of tea; sat up in armchair for one h

November 27.—Walked into adjoining room, and sat t hours; temperature subnormal this morning.

November 29.—Walked down to the drawingroom to-d up for two hours; all medicine stopped, and plenty of nouris porridge and cream at bed-time.

December 3.—Got minced chicken for first time to-day, an

December 4.—Went out for half an hour in the carriage.

December 6.—Had filleted sole for dinner and baked apple of wine.

December 8.—Patient's cough has disappeared; he eat remarkably well; is gaining strength, but still looks thin, as patients do in the stage of convalescence.

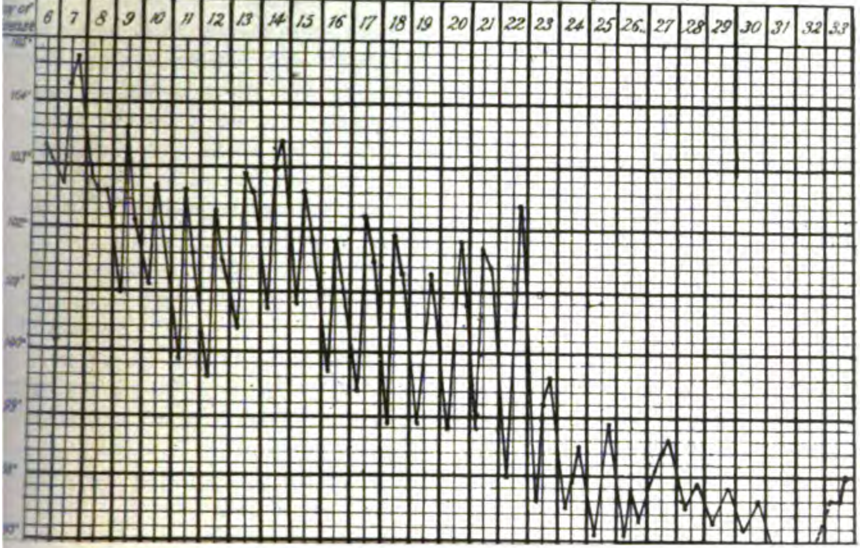
December 7, 1891.—The patient's temperature had been the morning for three weeks. He had been downstairs, i good health, and eating such solids as chicken, fish, and brea His only complaint was of constipation. Each morning abo he had one very small motion, always composed of lumps, singly or sometimes in a hard, large mass. This was dul well as marked on the daily chart.

In the afternoon of this day the patient saw his first vis who stayed with him from 4 to 4 45 p.m. He seemed company very much, laughing and talking pleasantly. At had tea. At 7 p.m. he went to bed. At 8 p.m. he said to "I fear I have talked too much this afternoon, I have a hea The nurse took his temperature, and found it 100°. A dose liquid extract of cascara sagrada was given, and acted well but at 9 a.m. the temperature was still as high as 99·8°. N ing, the patient dressed as usual, came down to drawingro went out for a drive in the middle of the day. He dined o

Towards evening he became very feverish, the thermome 102·8°; he was sponged, after which he slept well. Next was dull and heavy-looking, complained of headache and arms; the temperature was 102°. I saw him with Dr. considered that the attack was one of influenza—basing

CHARTS OF TEMPERATURE RANGES IN RECURRENT ENTERIC FEVER.

Fig. 1.—First Attack, April, 1877. Patient aged 15 years.



the sudden onset, the neuralgic pains, the thickly-coated tongue, and the rapid, running pulse. The temperature went on rising, however, the fever culminating on the evening of the fourth day in a reading of 104·6°. On the following day the reappearance of rose-spots in considerable number left no room for doubt as to the nature of the case, which was clearly one of relapse in enteric fever. At this time the temperature ran very high, the tongue was very dirty and coated, headache was severe, and there was much delirium at night, the patient imagining that other sick people were in the room with him, and asking the nurse if she had fed them also. There was albuminuria, and the urine was concentrated and loaded with urates.

One day the patient complained of sore throat, and we found that the tonsils were enlarged, while the uvula, soft palate, and pillars of the fauces were red and very œdematous. Much pappy exudation lay free on the surface of the mucous membrane. The throat symptoms yielded readily to frequent spraying with lactic acid, the "nebula" employed consisting of one drachm each of lactic acid and glycerine with 14 drachms of water.

The course of the relapse fever is shown in Fig. 3 in the Plate of the temperature charts. From December 12 to 16 the temperature was 102° each evening, falling to 100° in the mornings; afterwards for a week it was subnormal each morning, but rose to 100° in the evening.

December 30, 1891.—The patient is, happily, once more very well, eating solids, coming downstairs, and feeling wonderfully strong. Constipation set in with convalescence as before, but on this occasion a teaspoonful of castor oil and one of glycerine were given in milk every second morning with a good result—this simple dose keeping the patient comfortable and regular.

January 7, 1892.—The patient's temperature, which had been persistently subnormal for at least ten days, began to rise a little—from 96° to 98° in the evenings.

January 25, 1892.—On the evening of this day the patient, now quite convalescent, sailed for Holyhead *en route* to Torquay.

Remarks.—There can be no question that in a large majority of instances one attack of enteric fever confers a life-long immunity from a second. Murchison quotes Bretonneau, Gendron, Chomel, Louis, Piedvache, Sir William Jenner, William Budd, and Bartlett as holding a belief in the doctrine of acquired immunity as applied to enteric fever. At the same time well-authenticated instances of persons contracting this fever a second time are on record. Several have come under Murchison's own notice, in which both attacks occurred subsequent to puberty. Trousseau

records two examples of a second attack—one pat
suffered again after an interval of four years; the
had a severe attack at the age of twelve, and a
severe, a year afterwards. Similar instances o
second attacks have been recorded by Piedvache, M
Paul and William Budd. To this list, I submit,
reported may with propriety be added.

On November 5th and 6th, 1891, I had the adva
the kindness of Professor Emerson Reynolds, and
Mr. Emil Werner, of testing the diagnostic effica
very striking diazo-test in a series of specimens of
the series were non-typhoid urines, two others wer
fever patients, and the fifth was the urine of the ge
case is the subject of the present clinical record, o
of well-marked enteric fever, he having suffered
already stated) from equally well-marked enteric f
previously, when a lad of 15 years. In all cases a c
in the urine was observed on application of the
non-typhoid urines only a deeper yellow was pro
undoubted primary typhoid urines a beautiful
quickly developed. In the case of recurrence, ch
diate between these extremes were noticed—it wa
vious attack exerted some controlling influence ove

Perhaps the most interesting feature in the case
communication is the *relapse* which followed hard u
attack of enteric fever. In my long experience of
I can recall only three cases of true relapse. One
ported to the Academy of Medicine in Ireland in th

Towards the close of the year 1886, I met with a
of true relapse in enteric fever, in the person of a
medical profession—a gentleman aged thirty-tw
primary attack lasted exactly 28 days, and was follo
of apyrexia, during which the bowels were conf
thirty-fifth day rigors occurred in the afternoon, a
rose to 104° within 30 hours. This new fever last
was accompanied by a fresh but scanty crop of rose
seventh day onwards.

The third case is the subject of the present
communication to the Academy in 1885, I pointed o

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[*] Trans. of the Acad. Med. in Ireland. Vol. IV. 1886. Page
Journ. Med. Science. Vol. LXXX. December, 1885. Page 486.

the many causes of renewed pyrexia, or feverishness, in the later stages of enteric fever, or in convalescence from this disease, true relapse necessarily occupies a foremost place. And this arises, not so much from any increased danger to the patient's life—which is theoretical rather than founded on fact—as from the comparative infrequency of the occurrence of true relapse in this form of continued fever.

On that occasion I also stated that by "true relapse" I understand a second attack, in which the characteristic phenomena of enteric fever present themselves in sufficient number to establish the diagnosis of the disease—for example, enlargement of the spleen, abdominal tenderness, ochrey diarrhœa, and rose spots; or epistaxis, feverishness with evening exacerbations, abdominal tenderness and tympanites; or any other grouping of the symptoms of this fever met with in practice; the fact being admitted that a perfectly typical case of primary enteric fever, showing *all* the characters of the disease, does not often come under observation, even in the wards of a large epidemic hospital. "By a relapse of enteric fever," writes Murchison,[a] "is understood a second evolution of the specific febrile process, after convalescence from the first attack is fairly established. Relapses must not be confounded with recrudescences, which are common during the stage of ulceration."

It is interesting to observe that, as usual, the relapse in the case I have detailed ran a shorter and on the whole a milder course than the primary attack. This is in accordance with clinical experience. Murchison states that the duration of the second attack is commonly, but not necessarily shorter than that of the first, while its type also is generally milder. As a result of his investigations, it would appear that a relapse is only about half as dangerous to life as a first attack.

The ætiology of relapse in enteric fever is not easily explained. In my former communication to the Academy on the subject, I have fully stated the views which are held upon this point. In the instance now before us, I cannot help thinking that the patient was poisoned afresh with the virus of enteric fever from without while he was in a particularly susceptible condition, in part owing to his weakened state, in part owing to the obstinate constipation which characterised in his case—as in so many others—the stage of convalescence.

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[a] The Continued Fevers of Great Britain. Third Edition. Edited by W. Cayley, M.D., F.R.C.P. London: Longmans, Green & Co. 1884. Page 552.

PART II.

REVIEWS AND BIBLIOGRAPHICAL

A Manual of Operative Surgery. By **Frede**
F.R.C.S.; Surgeon to, and Lecturer on Anatom
don Hospital; Member of the Board of Examine
College of Surgeons. With 422 Illustration
Medium 8vo. Pp. 775 and 775. London:
Limited. 1891.

Mr. Treves' well-established reputation as a skilfu
surgeon led us to anticipate a work which woul
standard of merit, and would prove a distinct gain
of English surgery. In this we have not been dis
these two handsome volumes, which for clearness
of typography and illustration could hardly be
which reflect the highest credit on the publishe
accurate reflex of the best that is known and
operative manipulations of present-day surgery.
not mean to imply that Mr. Treves' work is a c
nothing more. It bears on every page evidence of
independence of judgment. Though giving, as h
Preface, "the account of such particular methods a
with the names of individual surgeons . . .
words of the authors," Mr. Treves has, in every in
the various methods advocated to the touchsto
experience and practice, and formulated his opinio
Indeed, the generous appreciation of the work of
everywhere shown is one of the pleasing feature
Some, no doubt, may be inclined to cavil at a libe
and absence of dogmatism throughout in dealing
operations, and would be better pleased to hav
recommendation of one particular procedure from
such a large and varied experience, rather than h
selection and discrimination thrown upon themsel
sonally we think that in this course Mr. Treves has

judgment. Anatomical advantages or disadvantages are in all cases carefully put before the surgeon, and he is left to weigh the evidence and form his own decision. No operation, as devised by its originator, can possibly be adapted without modification to every emergency, and the surgeon who has carefully studied several alternative procedures with the peculiar needs of his own case ever present in his mind, is much more likely to decide well for his patient, and to come successfully out of a difficulty, than if he were to blindly follow in all its details, suitable or otherwise, some specially designed and highly-lauded operation. We have specially drawn attention to this absence of compulsory selection, because it is frequently—and most unjustly—urged against authors by critics whose apparent line of reasoning is that without dogmatism there can be no originality, and that a book which does not bristle with the author's personality must *à priori* be a collection of platitudes and secondhand thoughts. Of Mr. Treves' originality there can, however, be no question. Those acquainted with his previous writings will be glad to find many of his well-known and frequently-expressed opinions here crystallised out into sparkling aphorisms. This is well illustrated in the first part of the work, which deals with the preparation of the patient for operation, the after-treatment, the accessories required, and the general principles of operative surgery, and is a model of what such instructions ought to be. We quote a few specimens :—"A shakiness of the hand may be some bar to the success of an operation, but he of the shaky mind is hopeless." "He who is about to undertake an operation should know precisely what he intends to do, and should then proceed to do it." "Ingenious instruments which fold up into a small compass, or which combine many functions, are usually to be avoided." Equally true is the observation that, "Some of the least progressive periods in the development of the surgeon's art have been marked by the prolific production of instruments;" and we can emphatically endorse every word Mr. Treves says as to the amount of operative surgery that can be done with a scalpel and pair of dissecting forceps for armamentarium! We quite agree with his remarks about "amputation" and "finger" knives, and his wholesale condemnation of the director, that "sturdy and dangerous bit of steel" to which "the scalpel plays a subsidiary part." What the author describes as *ligature retractors* mark a distinct gain in operative technique. In the method of dealing with the wound after operation, Mr. Treves lays especial stress on "*obliteration of the wound cavity*" as a factor in secu union. and gives full prominence to his well-known provision of free access of air to all wounds, no bed- allowed to keep the parts in a moist and germ-reekin Altogether we regard this first part of the book, to w given so much space, as one of its most important an sections.

Part II. deals with the "Administration of Anæ has been written by Dr. F. W. Hewitt. We can co mend it to all those on whom devolves this duty at in the operating theatre as presenting in a clear an an account of the various anæsthetics now in use a of their administration, the dangers of the anæsthe the means to be adopted in cases of accident during

Part III. treats of the "Ligature of Arteries." T details are excellently given, and the various steps tions—*points de répère* of French authors—are clea still we cannot help feeling that this is one of satisfying parts of the work. Mr. Treves discuss the question of the ligature material—a point to w excessive importance has been attached by a cert London surgeons—and gives his opinion that, "the material on the whole is chromicised catgut. It mus make, be strong, round, quite lissome, of uniform perfectly smooth. The size must be regulated by t of the vessel to be tied."

In Part IV. "Operations upon Nerves" are desc stretching, neurotomy, neurectomy, and neuroraphy. graver procedures in this branch of surgery, Ca Rose's operations come in for notice. As regards superior maxillary nerve and Meckel's ganglion, remarks—"Since it is to be questioned whether th is of permanent value, the operations last described justified by the results obtained;" while as regar operation he writes, "Sufficient time has not yet el of an opinion being formed as to the value of this seve As Mr. Horsley's much more severe intracranial met ing the Gasserian ganglion had not been publish issue of this work, no reference is made to such a p most surgeons will repeat for themselves the questio the accounts given of these various neurectomies.

Space will not permit us to speak in detail of the entirely mirable sections which follow, and which deal with "Amputa-ons," "Operations upon Bones and Joints," and "Tenotomy." n the first especially, and to a large extent in the second, of these arts the influence of the French school of surgery is paramount; d considering the brilliant work of the French surgeons in some f these departments which they have made specially their own, it annot be wondered if their work is predominant throughout. hap. 27 of Part V. gives the best account we have met with of e osteo-plastic resection of the foot, known by the names of Wladimiroff-Mickulicz; and in the same part is an excellent ount of the complete removal of the upper extremity—the *putation interscapulo-thoracique*—preference being expressed for e method of Paul Berger. In dealing with fractured patella—at much-vexed question of surgery—only two methods are scribed: that of Sir Joseph Lister by buried silver sutures, and t of the author by modified Malgaigne's hooks. Considering e variance of opinions and of results, some alternative methods manded at least a brief notice.

Mr. Treves is too much under the influence of the French school unhesitatingly condemn so-called subperiosteal resection, but he ly limits its practicability, and protests against the operator's gical faith being oppressed by "the tyranny of a method." "It y be said, in conclusion, that the subperiosteal operation is excel-t in theory, but it is only excellent in practice in selected cases. hough it is the procedure which should be adopted whenever sible, it can never become a routine method of performing exci-n. It is, indeed, of somewhat limited application. A partial periosteal resection may often be carried out in instances where e complete operation is impossible, and there must be few cases which it is not desirable to take every precaution to preserve connections of ligaments and the periosteal attachment of dons." This is most excellent surgical theory, but in what portion of cases is it possible to preserve these periosteal attach-nts? In how many chronic cases are tendons and periosteum ture-beds of tubercle and septic organisms? And of what benefit t to retain a periosteum thickened and fibrous by long inflam-tory process, and long destitute of any bone-forming capacity? r. Treves admits the undesirability in cases of new growths.

In Chap. 20, Part IV., an excellent account is given of arthrec-my—the so-called *erasion of a joint*—as applied to the knee, and a valuable suggestion is the application of Mr. Barker's flushin gouges to this operation.

As proof of the careful way the work has been brought out w may add that in this volume the only slips which have caught o observation are—"are" for "is," p. 6; "exomphalos" for "exoph thalmos," p. 230; and "*De* Carte," p. 278, as the name of th designer of the tourniquet for the compression cure of aneurysm.

The second volume opens with a section on Plastic Surger which is in every respect an admirable one. The general questio is dealt with under three broad principles of procedure:—1. Th direct union of freshened edges which are brought together, a tension upon the parts having been relieved; 2. The method gliding or lateral displacement, embracing such operations those of Burow, Jaesche, Brüns, and Weber; and 3. The meth by flap formation, including the well-known Indian and Itali operations. Here, also, is a valuable chapter dealing with th "Relief of Cicatricial Deformities after Burns," in which th methods of Mr. Croft and the admirable results obtained by hi are fully described. As, perhaps, some surgeons are as y unacquainted with the method, it may be well to quote Mr. Treve description of its salient features. It "consists of raising a stra or bridge of sound skin, which is left attached by its two extr mities, but which is separated through the rest of its extent fro the subjacent tissues by means of oiled silk." The flap so raise is allowed to granulate and "fatten," during which process it na rows very considerably, while increasing at the same time in thic ness and vascularity. "After the process of granulation has bee well established, the contracted structures are divided, and th bridge of skin, having been severed at one extremity, is made occupy the gap formed by such division. The operation is inde a flap operation, in which the attachment of the flap in its ne situation is deferred until granulation has occurred." We hav seen wonderful results in the closure of apparently hopeless ga in several instances, and can cordially recommend all surgeons try its benefits in appropriate cases. Space will not allow us deal with the chapter devoted to Rhinoplasty, but it is full information, and will, we believe, be found to be the most com plete account of these procedures that has yet been given in an English text-book. We may point out that in the section dealin with webbed fingers the operation usually known in these countri as "Didot's" is here described as "Diday's," that surgeon bein accorded the priority of description. As the operation is also known as "Nélaton's," we have here a puzzling richness of nomenclature.

Part IX. deals with operations on the neck, and an excellent chapter on Tracheotomy is included. Full accounts are given of Bose's operation, so largely practised in Germany, and of Mr. Whitehead's modification of it, but we must give the preference to the original procedure as more surgical and less likely to inflict damage than the injudicious use of a "raspatory" among the delicate peritracheal tissues. One sentence might be fitly engraved on the mind of every surgeon:—"Tracheotomy affords a striking illustration of the adage 'the more haste the less speed.' The surgeon who proceeds to open the trachea in a precise and delicate way will have completed the operation before the frantic man, who, with a palpitating heart and a trembling hand, cuts wildly towards the spine, and who appears to be actuated by the unsteady conviction that he must gash something or the child will perish." This picture is no exaggeration of scenes of which, we regret to say, we have been eye-witnesses.

In treating of thyroidectomy, complete or partial, it is surprising to find no reference made to the operation of division of the isthmus of the thyroid body alone—a procedure which in the hands of some surgeons has yielded most excellent results and is certainly deserving of notice in a manual of operative surgery. This is an omission which it is to be hoped will be rectified in future editions.

The various operations for the removal of the tongue—Whitehead's, Kocher's, &c.—are fully detailed, and it is interesting to note, in connection with the discussion which took place at the beginning of this session in the Surgical Section of the Royal Academy of Medicine in Ireland, Mr. Treves' deliberately expressed opinion: "I believe that the removal of the tongue with scissors after the linguals have been ligatured in the neck provides the best method of excising the organ" (p. 189); and on p. 202 the advantages gained by this method are admirably discussed in detail in reply to Mr. Jacobson's objections to its performance.

Knowing how specially Mr. Treves' work has been associated with abdominal surgery, one naturally turns with intensified interest to that section in which his latest conclusions are embodied. And how fully these are set forth may be gathered from the fact that Part X., dealing with "Operations upon the Abdomen," occupies 294 pages of the second volume. Only one or two debated points can be touched upon here. In supra-vaginal hysterectomy for myoma Mr. Treves unhesitatingly declares in favour of the intra-peritoneal method of treating the pedicle:—"In comparing these two procedures it may at once be said that the intra-abdominal method is the better, is the more perfect, and is the one more completely in accord with the soundest principles of operative surgery." And to this opinion we hope all philosophical surgeons will soon subscribe. An excellent and clear account of Senn's method of intestinal anastomosis, and of Sach's modification of it, will also be found in this section, though apparently the author regards the method as of very limited application. As regards the relative value of lumbar and iliac colotomy Mr. Treves is disposed to agree with the conclusions put forward by Mr. Bryant in his Bradshawe lecture—an opinion, we are glad to think, daily upheld by fewer surgeons. Chapter 15 contains a very complete account of "Operations on the Liver," but a few years ago a blank page in surgical literature.

In the portion of Part XV. that treats of cerebral surgery we are glad to find references given to Dr. Birmingham's admirable studies on the relative positions of the mastoid antrum, lateral sinus, &c., as we believe these are the best and most accurate guides that have yet been laid down in dealing with conditions in this region requiring operation.

Part XVI., "Operations on the Thorax and Breast," contains a good, if somewhat brief, account of the principal surgical procedures in this field, and brings the work to a conclusion. Estlander's operation, and the subject of "Incision and Drainage of Lung Cavities," are here discussed, and the conclusions arrived at are mainly based on Mr. Godlee's admirable lectures on these operations.

We have now brought to a close our survey of these volumes, and we can heartily congratulate Mr. Treves on the use to which he has put the "leisure" obtained "during the last four years." We have carefully read the work, and have no hesitation whatever in recommending it as the best manual of operative surgery in the language. It is the work of a practical and progressive, as well as philosophical and conservative, surgeon, and for soundness of teaching and lucidity of phrase and expression is, in our opinion, without a rival. It will deservedly add to the high reputation which Mr. Treves has already earned by solid and earnest work in many fields of surgery.

The Treatment of Typhoid Fever, and Reports of Fifty-five consecutive Cases with only one Death. By JAMES BARR, M.D., Physician to the Northern Hospital, Liverpool; Medical Officer of her Majesty's Prison, Kirkdale, &c. With Introduction by W. T. GAIRDNER, M.D. London: H. K. Lewis. 1892. Pp. 212.

THE important feature of this book is the account of Dr. Barr's treatment of serious cases of typhoid by means of a continuous ath in which the patient is immersed for days. It, however, ntains, as well, Dr. Barr's views as to diet, drugs, and general management.

After the introduction there is a historical sketch of the treatent of the continued fevers from the time of Sydenham; most minence is naturally given to the various antipyretic methods. Dr. Currie, who used cold affusion very largely, and laid down ry careful rules for its adoption in suitable cases, is largely oted. Dr. Barr shows that the treatment by cold water is by o means new. Dr. Robert Jackson used it as early as 1774, his actice having been to give the patient a warm bath, and after at to pour cold water over him. Currie adopted the treatment y affusion of cold water in 1787; and although, as Dr. Barr shows, has been employed with good results by various physicians from me to time ever since, it has been recklessly and foolishly used others, and has never met with general adoption.

Dr. Barr describes his own method of management at considerle length. He begins the treatment with a purge of 2 grains of omel, and when there is constipation during the course of the ess, he repeats the same remedy in about half-grain doses, asionally also using enemata. He strongly advocates the tine administration of intestinal antiseptics; having tried many ugs, he now prefers salol, giving to an adult 10 grains every r hours, and if much diarrhœa is present, adding 10 grains of muth salicylate to each. If there is, on the other hand, conpation, one-twelfth of a grain of calomel may be added to each e of salol. In none of the new antipyretic drugs has Dr. Barr y faith as far as their use in typhoid is concerned.

Dr. Barr's views with regard to the diet of typhoid patients fer considerably from those held by most physicians. "During febrile stage the food, whatever it be, should be liquid, and uld be administered every two or three hours. I place no it on the quantity of liquid nourishment, so long as it is retained in the stomach and properly digested; but for an adult I usually find that about four pints of milk, eight to sixteen ounces of bread, and two ounces of butter, are appropriated daily, and there is no use in giving any diet which is not assimilated. The bread should be boiled with the milk, or it may be peptonised, and the butter added. In the tank the appetite soon becomes very good, and these quantities do not suffice."

The section on antipyretic treatment is chiefly devoted to a description of the author's tank and its results. The apparatus is fully described; for all details we must refer our readers to the original. As far as we can gather from the description, Dr. Barr would put all severe cases into this continuous bath. The water is kept at a temperature of between 90° and 98° F. The patient is moved as little as possible, and is enjoined to pass his urine and fæces into the water, but as his buttocks rest just over the large discharge pipe of the tank, the water can be kept fairly clean. Some cases, however, were raised out of the water to have their bowels moved. The patients remained a variable time in the tank—some only a few days, others as long as thirty-one days. Under the influence of the tank-treatment Dr. Barr says the temperature is lowered, vaso-motor tone is improved, bronchitis and congestion of the lungs lessen and soon disappear, the tongue becomes moist and clean, appetite and digestion improve, and the diarrhœa lessens, delirium disappears, and the general well-being of the patient greatly improves.

The rest of the book—rather more than half of it—is occupied with detailed notes of 55 cases of typhoid treated by Dr. Barr in accordance with the principles laid down in this work. Of these 55 cases only one died—a remarkable record.

This is one of the most original works on typhoid fever that we have read. Dr. Barr is no mere follower of others; he has struck out a line for himself, and his results have amply justified his boldness. Few physicians will read this book without being the wiser for having done so. Even though we may not approve of all Dr. Barr's methods of treatment, and though we might shrink in practice from following his directions, nevertheless it is always well to know what able and learned men are doing, and to consider whether the treatment which we are ourselves satisfied with is after all the best one we can possibly adopt.

We can warmly recommend Dr. Barr's work to the careful consideration of our readers.

Report of the Hyderabad Chloroform Commission. With a Preface by Sir Asman Jah, K.C.I.E., Prime Minister of Hyderabad. Bombay: Printed at the *Times of India* Steam Press. 1891.

The first feeling of every medical reader of this quarto of 400 pages cannot be other than that of gratitude to his Highness the Nizam of Hyderabad for his munificent generosity in defraying the expenses of the Hyderabad Chloroform Commissions. Afterwards the thoughts will naturally arise, to wit:—Is the evidence conclusive in favour of chloroform, or are the physiological experiments on the lower animals and the numerous and accurately noted clinical cases open to any other conclusion than that arrived at by the Commission? And are native Indians protected by racial characteristics or climatic conditions from the pernicious effects of chloroform?

Acting on the doctrine of probabilities there are no good grounds for thinking otherwise than favourably of chloroform after its successful issue from all the tests applied. No anæsthetic has been submitted to so many and such various tests as chloroform. The second Hyderabad Commission has performed its work with a thoroughness and completeness hitherto unknown; and the fact that the decision of the Commission coincides with that of the great majority of the medical profession, both at home and abroad, is eminently satisfactory, and well calculated to allay the public anxiety as to the value of the drug which enthusiastic etherists created.

One good has resulted from the labours of the Commission that must advantage the public—to wit, the teaching to students and practitioners the nature and mode of administration of the more novel anæsthetics. That chloroform cannot, no more than any other powerful therapeutic remedy, be administered by the ignorant or careless has been emphasised in too marked a manner to allow of the lesson being neglected.

The Report of the Commission was held back, as stated by Sir Asman Jah, in compliance with the wish of Surgeon-Major Lawrie, "that the experimental data of the Commission should be subjected to the test of prolonged clinical experience;" and with a liberality of thought Sir Asman wishes that it may be submitted to "that free criticism and discussion that are essential to the final acceptance of the principles confirmed or brought forward by the Commission."

Surgeon-Major Lawrie, in his statement of the "origin of the Commission," makes the important and honourable announcement that the "Commission was greatly encouraged in this work by the personal interest shown in it by his Highness the Nizam, who, accompanied by his staff, visited the laboratory on two special and memorable occasions." And further adds:—

> "Two commissions to examine into the alleged dangers of chloroform have been appointed by his Highness the Nizam's Government. The first Commission, which was appointed in 1888, consisted of Surgeon Hehir, I.M.D., President, and two members, Messrs. J. A. Kelly, L.R.C.S. & P. (Ed.), and A. Chamarette, L.M.S. This Commission was applied for by Surgeon-Major Lawrie, Residency Surgeon, Hyderabad, because, having always believed in the truth of Symes' teaching that chloroform can be used judiciously so as to do good without the risk of evil, he desired to show by experiments upon dogs that in death from chloroform the respiration always stops before the heart. This point having been proved, the second Commission was applied for, because it was felt that Symes' principles, which both experience and experiment had shown to be practically sound, must be founded on a firm physiological basis."

Such was the genesis of these Commissions which have done so much to restore chloroform to professional and public favour.

The experiments of the Commission were conducted on the following lines:—

"1. The attention of the Commission should be specially devoted to the effects of chloroform on the circulation and respiration.

"2. The chloroform should be administered generally in the same way as it is ordinarily given to patients in the Azful Gunj and Residency Hospitals.

"3. The dose and rapidity of administration should be varied in every possible way, and the admixture of air with the chloroform should also be varied.

"4. At least 100 full-grown dogs should be killed with chloroform, and the points to be specially noted should be—

> "(*a*) The time taken to bring the dog fully under the influence of the anæsthetic.
>
> "(*b*) The interval between this and the stoppage of respiration and cessation of the pulse and heart's action.
>
> "(*c*) Whether the heart is directly affected by chloroform, and whether it ever ceases to beat either in slow or rapid poisoning before the respiration stops.
>
> "(*d*) The effects of artificial respiration commenced directly the respiration stops, and at varying intervals afterwards.

"5. The details of procedure will be left to the Commission, and yo are requested to submit a report of the work of the Commission at any time convenient to yourself before the termination of the official year."

Admirable as this scheme is—and for testing the lethal properties of the anæsthetic it would be difficult to formulate a better one—the omission of the use of oxygen gas and the inversion of the animal as restorative methods in cases of suspended respiration are greatly to be regretted. Indeed, when carrying out such exhaustive physiological experiments, the testing of the better known restoratives, such as strychnin, amyl nitrite, and atropin hypodermics might have been undertaken by the Commission.

The first Commission concluded that "chloroform may be given to dogs by inhalation with perfect safety, and without any fear of accidental death, if only the respiration, and nothing but the respiration, is carefully attended to throughout, and the second Commission confirms the opinion.

It is to be hoped that, if these physiological experiments are repeated, the value of oxygen as an antidote to anæsthetic narcosis will be tested. The testimony in its favour as an antidote to anæsthetic necrosis comes from such well-known writers as Jackson, Blanchet, Duroy, Faure, Gianetti, Ozanam, Perrin, Ludger-Lallemand, P. Bert, and others.

As an antidote to carbonic oxide and carbonic dioxide there is the testimony of Faure, Gianetti, Linas, Créquy, C. Paul, Coignard, Hayem, and others.

Davy, whilst testing carbo-hydrogen gas, found out its value, and since that Sierking, Esdaile, and others, have confirmed Davy's statement.

Sewage gas has also its poisonous effects counteracted by oxygen, as shown by the cases reported by Créquy, Limousin, Faure, and Ozanam.

It may, however, be answered that the Hyderabad Commission had but one duty to perform—to wit, to learn how chloroform killed. True, but the scientists went a little further. They resuscitated some of the asphyxiated animals, and noted the effects of artificial respiration. Perhaps, however, it is better that the oxygen-chloroform experiments should, as Jackson did with the oxygen-ether, be made the work of a special occasion.

On the third page of the Report we are reminded that the volume before us is a history of the origin and incidents of the Commission as well as a scientific record of the work and the deductions from it; and we have copies of "leaders" of medical journals and of their correspondence on the chloroform controversy, matter which might well have been delegated to the appendix.

Those who take a keen interest in the anæsthetic controversy read all sides of the question, and are quite familiar with the names of the principal combatants, and know even the less distinguished writers on the subject. Historically the record may be useful, but the historical value of the leaders and letters would in no way be diminished by a place in the appendix.

Paragraph 11, page 9, is occupied with a statement of American opinion on the relative value of chloroform and ether, and, like many others, Dr. Lawrie confounds the New England States with the United States. In so doing he reminds us of those politicians who in describing Ireland leave out Ulster. The New England States are not the United States, neither is their opinion the American opinion. The men who raised American surgery to its present high standard were Southerns, men of the Cotton States; and when the State-right War occurred the Confederate surgeons exhibited a skill and resourcefulness, and produced better results than up to that time any military surgeons ever recorded, and all this was done amidst the greatest difficulties. The men who have this splendid record to their credit without exception are chloroformists. Two of the most distinguished of these Southern surgeons have expressed their views on the chloroform questions in no uncertain manner, as may be seen by reference to Mr. Foy's book, "Anæsthetics: Ancient and Modern." That the Eastern States advocate ether in season and out of season, and that they are intolerant of any difference of opinion, is notorious, but, nevertheless, the United States refuse to be dominated by a noisy, didactic faction, and with the majority of American surgeons chloroform continues to be the favourite anæsthetic. It is just possible that Professor Woods' pronouncement in favour of ether was inserted by Dr. Lawrie to give his readers the benefit of reading the strong and, we think, erroneous statement that "hundreds of utterly unnecessary deaths have been produced by the extraordinary persistence in its use by a portion of the profession."

The great value of the Commission depends not alone on the many and varied experiments performed, but on the fact that they tried "as far as possible to give the experimental data from which their conclusions are derived, thus enabling all future investigators to utilise their data, and allowing of a criticism both as to the experiments performed and the conclusions deducted from them."

The Commission divided into two committees—one, the committee, was composed of Drs. Lauder Brunton, Bomford, Hehir, and Chamarette; the other, the sub-committee, was composed of Dr. Rustomji, Mr. Kelly, and Dr. Gay.

The committee first of all performed 27 experiments to test the work of the first Commission. The sub-committee worked in the same room under the supervision of the committee.

The experiments of the sub-committee, together with the first 28 performed by the committee, form a total of 430. In these experiments 268 dogs and 31 monkeys were killed outright, and 86 dogs and 39 monkeys were subjected to artificial respiration at varying intervals after the natural respiration had been arrested with chloroform.

The animals which were killed had chloroform administered to them in every possible way and under every conceivable condition. A large number of dogs were killed just as they were caught in the bazaars; others at various intervals after having heavy meals of meat or farinaceous food or fat; others fasting; others after the administration of Liebig's extract of meat, coffee, rectified spirits of wine, or ammonia. Most of these animals were healthy, but some of them had cardiac disease, and in many the heart and other organs were rendered fatty by the previous administration of phosphorus.

In a large number of cases morphin, strychnin, and atropin, singly and in combination, were given by subcutaneous injection at intervals before the inhalation was begun. Chloroform was given with and without inhalers in the vertical and recumbent positions; in glass and wooden boxes; in large and small doses; by being pumped into the trachea with bellows; and, in fact, in every way that could suggest itself to the Commission.

The results in one respect are uniform:—

> "In every case where chloroform was pushed the respiration stopped before the heart. The movements of the heart were in the first 66 cases of the sub-committee tested by auscultation, but afterwards by a needle inserted through the chest wall into the organ, and the thoracic cavity was laid open when doubt existed."

In the majority of uncomplicated cases, which include those fed in different ways before inhalation, the heart ceased to act in from two to six minutes after stoppage of the respiration. In one uncomplicated case the heart's action ceased within one minute after the breathing stopped. The heart ceased within one minute after the respiration stopped in two cases where the inhalation was very slow and prolonged, in four cases complicated by asphyxia. and in one where the subcutaneous injection of morphin (gr. $\frac{1}{2}$) and strychnin (gr. $\frac{3}{100}$) was administered beforehand. The maximal time the heart continued to beat after the respiration ceased, in the experiments of the sub-committee, was eleven minutes in a dog and twelve in a monkey.

The effects of chloroform do not appear to be interfered with or much influenced by any of the variations in the method of preparation of the animal for, or of the administration of, the anæsthetic. There are four general exceptions to this statement—

(1) In very slow administration.
(2) In prolonged administration.
(3) In cases complicated with partial asphyxia.
(4) In one case where one-third of a grain of atropin was administered before the inhalation.

In these cases the heart stopped very soon after respiration ceased; and in all cases where the inhalation was accompanied by struggling, the animals became insensible with unusual rapidity. In these cases, also, the interval between the cessation of respiration and the time of possible restoration by artificial respiration was shortened.

As regards the restorative effects of artificial respiration, the sub-committee found it nearly always successful if commenced within 30 seconds after the respiration ceased; very seldom successful if commenced between 30 and 60 seconds after; and always unsuccessful if not begun till after 60 seconds. In 44 cases in which artificial respiration proved successful it was commenced on an average 28·2 seconds after natural respiration ceased; in 3 unsuccessful cases the average was 31·5 seconds.

The sub-committee formed the opinion that artificial respiration was less successful in restoring the respiration after it had been stopped by chloroform in cases where a subcutaneous injection of morphin was administered before the inhalation was commenced. There were 18 cases in which this was tried. In the first 6, artificial respiration was commenced 8 seconds after cessation of natural respiration; of these, 5 died. In 3 cases artificial respiration was begun 15 seconds after the natural respiration ceased; and of these, 2 recovered, and 1 died. In 3 cases in which artificial respiration was commenced 20 seconds after the respiration stopped, 2 out of the 3 died. And lastly, in 6 cases where artificial respiration was not commenced till 30 seconds afterwards, 5 died, and 1 was revived. The average of those cases that were revived was 17·6 seconds, and of those that died in this series, 26·4 seconds.

To the practical surgeon the above experiments are, perhaps, the most valuable of the series. With such results before him the operator must recognise the supreme importance of attention to the respiratory function, and the necessity to its restoration to the normal on the slightest evidence of its failing. It may be also said to stop the use of morphin and atropin hypodermic injections, for even those who up to this have preceded chloroformisation by hypodermics of morphia will be unwilling to incur the risk of censure from the public should any chloroform fatality occur.

The stress laid on the risks associated with the struggling of the animal whilst being anæsthetised cannot but be approved. Struggling during anæsthetisation can, as a rule, be avoided by not forcing the anæsthetic at the beginning of the anæsthetisation, and if it occurs during the process later on the anæsthetic should be withheld until the struggling ceases. Some patients after a few violent struggles suddenly become completely under the influence of the anæsthetic, and, as the Commission's labours show, such persons are in imminent danger, their respiratory function being with more difficulty restored than in those whose anæsthetisation was unattended by struggling.

Experiments with recording apparatus are dealt with in Part III.

All the manometer tracings were photographed, and these photographs remain for all future inquirers who are so inclined to test the accuracy and value of the experiments and the correctness of the deductions that the Commission arrived at.

The explanatory notes were written partly at the time of, and partly after, each experiment, thus avoiding errors that might arise from forgetfulness or the loss of memoranda, and giving a much more interesting statement than could be produced otherwise.

For these experiments dogs, monkeys, horses, goats, cats, and rabbits, were pressed into service, and not alone chloroform but ether and the A.C.E. mixture were used.

On page 16 the objects of the Commission are thus stated:—

1. To test the suitability and safety of chloroform as an anæsthetic. The experiments with ether and the A.C.E. mixture were

instituted principally for the sake of comparison with chloroform on certain points, and it is not pretended that they afford a complete exposition of the action of these agents on the system.

2. The effect of pushing the above-named anæsthetics (*a*) to a dangerous degree, and more especially until the respiration ceases, (*b*) until death results.

3. The modification in the effect of these anæsthetics which result from—(*a*) asphyxia in varying degrees and produced by various means, (*b*) from the use of drugs such as morphin, atropin, physostigmin, and others.

4. The reality or otherwise of the alleged liability during ordinary chloroform administration to the occurrence of primary or secondary syncope or stoppage of the heart, brought about either by shock, or through fatty or weak heart, or by hæmorrhage, or by changes in the position of the body. To investigate these points, in the first place, a large number of operations which are reported to be especially dangerous in reference to shock were performed in every stage of anæsthesia, and numerous experiments were also made to show the effect of direct irritation of the vagus; secondly, a number of animals were dosed with phosphorus before they were experimented on. This caused weakness of the heart by fatty degeneration of its fibres, but, at the same time, other complicated changes in the whole of the organs of the body not met with in the condition known as fatty heart in human beings. On the other hand, there are conditions often met with in the fatty heart, such as changes in the coronary vessels, which were not produced by the phosphorus.

5. The effect of the anæsthetics above mentioned upon different animals, more especially upon monkeys, as the nearest approach to human beings.

The conclusions arrived at by the Commission are the following, which, for those who may not have an opportunity of seeing the Report and because of their extreme importance, are here given in full:—

"1. Chloroform, when given continuously by any means which ensures its free dilution with air, causes a *gradual* fall in the mean blood-pressure, provided the animal's respiration is not impeded in any way, and it continues to breathe quietly without struggling or involuntary holding of the breath, as almost always happens when the chloroform is sufficiently diluted. As this fall continues the animal becomes insensible, then the respiration gradually ceases, and, lastly, the heart stops beating. If the chloroform is less diluted, the fall is more rapid, but is always gradual as long as the other conditions are maintained; and however concentrated the chloroform may be, it never causes sudden death from stoppage of the heart. The greater the degree of dilution the less rapid is the fall, until a degree of dilution is reached which no longer appreciably lowers the blood-pressure or produces anæsthesia.

"2. If the inhalation is interrupted at any stage, the fall of pressure still continues at a rate which depends altogether on the rapidity of the fall while the chloroform was being inhaled. This after-fall is probably due to absorption of a portion of the residue of chloroform in the air-passages after the stoppage of the inhalation. In this way it often happens, if the chloroform is given rather freely, that though the respiration may be going on when the chloroform is discontinued it afterwards stops.

"3. If the administration of the chloroform is stopped at an early stage the pressure very soon begins to rise again, and gradually becomes normal; but if the chloroform is pushed further, there comes a time, not easy to define, when the blood-pressure and respiration will no longer be restored spontaneously, although the heart continues to beat after the inhalation is stopped.

"4. If the fall has been very gradual, it may occasionally happen that the respiration stops completely, and still the blood-pressure rises again, the respiration recommencing spontaneously in the course of the rise. In the same way, when the inhalation has been discontinued, the respiration may stop during the after-fall of the blood-pressure and begin again spontaneously. As a rule, if the respiration has stopped, or even become slow and feeble, at the time when the inhalation is discontinued and artificial respiration is not resorted to, the fall in blood-pressure will continue until death ensues.

"5. There are two conditions which frequently disturb the fall of the blood-pressure—viz., struggling and holding the breath, and it is only by great care that they can be avoided in animals.

"6. Struggling, independently of any change in the respiratory rhythm, appears generally to increase the blood-pressure. In one case of a dog much weakened by phosphorus the pressure fell every time he struggled.

"7. When struggling is accompanied, as it often is, by acceleration of the respiration and pulse, especially if the respiration is deep and gasping, it leads to a more rapid inhalation of chloroform, and consequently to a more rapid fall of blood-pressure and a greater after-fall. In order to keep the chloroform cap or inhaler in its place during the animal's struggles the administrator is obliged to hold it down more tightly over the nose and mouth, and this materially assists in hastening the rapidity of the inhalation, and consequently the fall in blood-pressure.

"8. The effect of involuntarily holding the breath, which, as anybody can prove by experiment on himself, must happen when an inhaler saturated with chloroform is first applied to the face, is much more remarkable, the pressure often falling with great suddenness, while the heart's action is markedly slowed. As soon as the animal draws breath again the pressure rises as suddenly as it fell, but the gasping respiration which succeeds then causes very rapid inhalation of chloroform with immediate insensibility and a rapid fall of blood-pressure, which quickly becomes dangerous.

"9. The combination of struggling with alternate holding the breath and gasping, which results if chloroform is applied closely to the face without sufficient dilution with air, causes violent fluctuations, and then a speedy fall of the blood-pressure, which very soon leads to a dangerous depression with deep insensibility and early stoppage of the respiration. The after-fall under these circumstances is rapid and prolonged. It is this combination of events which causes struggling animals to go under chloroform so quickly.

"10. The effect of holding the breath may occasionally cause a temporary fall of blood-pressure after the chloroform inhalation has been stopped, or even when the animal is quite out of chloroform. The fall is recovered from directly the animal breathes again.

"11. Slight continuous asphyxia, such as is produced by pressure on the neck by straps, a badly-fitting muzzle, or hindrance of the chest movements by the legs being too tightly bound down, gives rise to exaggerated and irregular oscillations of the blood-pressure, and slowing and irregularity of the heart's action. If it leads to, or is accompanied by, deep gasping inspiration, it is apt, like anything else which causes this, to increase the intake of chloroform and bring about a rapid decline of blood-pressure.

"12. Complete, or almost complete asphyxia, as by forcibly closing the nose and mouth or closing the tracheal tube after tracheotomy, has an effect similar to, but more marked than, that produced by holding the breath, and the character of the trace corresponds precisely to that produced by irritation of the peripheral end of the cut vagus. The pressure falls extremely rapidly, sometimes almost to zero, and the heart's action becomes excessively slow or even stops for a few seconds. If the Fick trace of experiment No. 148 be compared with the photographic reproduction of trace A of the Glasgow Committee, it will be seen that they are identical, and that the slow action of the heart with great fall of pressure, which the Glasgow Committee attributed to some capricious action of chloroform upon the heart, was undoubtedly due to asphyxia.

"13. The effect of asphyxia is the result of stimulation of the vagi. The proof of this is—(*a*) that the trace corresponds exactly, as stated above, to that produced by direct irritation of the vagus; (*b*) division of both vagi entirely abolishes it; and (*c*) the administration of atropin, which paralyses the vagus, also abolishes it.

"14. In trace 158 (Fick 4), which was taken during asphyxia after a full dose of atropin, it will be seen that there is an alternately slow and rapid pulse according to the phase of the respiratory movement, but no continuous slowing of the heart as in vagus irritation. But there was still a distinct fall of pressure after the atropin when the breath was held, and it was thought that the slowing of the pulse above noted in this condition might be due to the disturbance of the heart from tension in the pulmonary vessels in the absence of respiratory movement, rather than to irritation of the vagi. To test this point, Experiment No. 184 was instituted. In this experiment the dog's chest was forcibly inflated with bellows connected by a tube with the trachea, and the effect of this proceeding was to cause a fall of pressure and slowing of the heart exactly the same as an involuntary holding of the breath. The dog was then poisoned with atropine, after which inflation of the chest still caused a fall of pressure, but without slowing of the heart. The fall of pressure must be in some degree independent of vagus irritation, which however usually accompanies it.

"15. It only remains to be considered whether the slow action or temporary stoppage of the heart, with great fall of pressure, produced by vagus irritation, is in itself an element of danger in chloroform administration, and if it is not, wherein the danger actually lies.

"16. The experiments in which deliberate irritation of the vagi was carried on during anæsthesia show unmistakably that irritation of these nerves diminishes rather than enhances the danger of anæsthetics. The effect on the heart is never continuous, and as the vagus becomes exhausted, or when the irritation is taken off, the blood-pressure rises again, as it does when the same result is produced by asphyxia. The slowing of the heart and circulation, which is produced by irritation of the vagus by any cause, such as holding the breath in chloroform administration, retards the absorption and conveyance of chloroform to the nerve centres, just as holding the breath, whether voluntary or involuntary, prevents chloroform from entering the lungs; and, of itself, slowing or temporary stoppage of the heart in chloroform administration, is not dangerous.

"17. To answer the second part of the last question in paragraph 15 is easy enough, if it is kept in mind that the effect of vagus irritation upon the heart is never continuous; and in chloroform administration, as the pressure rises again after the slowing of the heart and temporary fall of pressure produced by any form of asphyxia, violent respiratory efforts with bounding heart's action lead, as in the case of struggling, to a rapid and dangerous inhalation of chloroform, and consequent rapid and dangerous decline in blood-pressure. It is, in fact, the temporary exhaustion of the vagi after stimulation that is to be feared, and not the actual stimulation as long as it is continued.

"18. In accordance with this fact, it will be found that in chloroform administration neither holding the breath, even if involuntary, nor vagus inhibition, can be kept up beyond a certain time; and if the chloroform is not removed from the face, one or both of two things may happen—(1) when the animal breathes against it, takes deep and gasping inspirations, the lungs become filled with chloroform, and an overdose is taken with extreme rapidity; or (2) when the restraining influence of the vagus is taken off the heart, through the irritation ceasing or the nerve becoming exhausted, the heart bounds on again, and the circulation is accelerated in proportion. The blood then becomes quickly saturated with chloroform, and an overdose is at once conveyed to the nerve centres. The theory which has hitherto been accepted is, that the danger in chloroform administration consists in the slowing or stoppage of the heart by vagus inhibition. This is now shown to be absolutely incorrect. There is no doubt whatever that the controlling influence of the vagus on the heart is a safeguard, and that it is the exhaustion of the nerve which is dangerous.

"19. It can be readily understood how a condition in which the pulse is rapid and bounding with high blood-pressure leads to more rapid absorption of chloroform from the lungs, and a more rapid propulsion of the chloroformed blood to the medulla oblongata, and consequently to a more rapid paralysis of the respiratory and vaso-motor centres and precipitous fall in the blood-pressure. Such a condition is produced in some cases by ether, or by division of both vagi, or by a full dose of atropine. Not only is the poisoned blood carried more swiftly to the vital centres in these cases, but added to this there is the fact that, as the heart is already doing its utmost before chloroform is given, it is unable to stave off by increased work the fall in pressure that occurs when the vaso-motor centre is paralysed. On the other hand, it seems clear from Experiment 92 that the direct action of chloroform upon the heart is not the cause of the fall of pressure that occurs when it is inhaled.

"20. In Experiment No. 92, repeated injections of 20 m. of chloroform were made into the jugular vein, and its effect was not to paralyse the heart, but to produce anæsthesia and a gradual fall of blood-pressure, exactly as if the chloroform had been inhaled. In Experiment No. 72, after a considerable amount of ether had been injected into the jugular vein, and bounding condition of pulse had been produced, the effect of injecting chloroform into the jugulars was much greater, and the fall of blood-pressure much more rapid and dangerous than in the case when chloroform alone was injected. Granting, then, the truth of Ringer's conclusions from experiments on the frog's heart (which have not been repeated and confirmed by the Commission) that chloroform has a gradual paralysing effect upon the heart's tissue, we must conclude that such an effect, in the degree in which alone it could occur in the practical inhalation of chloroform, would rather be a source of safety than of danger.

“21. The Committee discussed the advisability of cutting the vagi some time previous to experimenting on the blood-pressure with chloroform. The effect of this procedure is to cause continuous rapid action and tendency to exhaustion of the heart, as well as to degeneration of the terminal branches of the nerves in the heart if the animal live sufficiently long. Such experiments might be of some interest theoretically, and also have had a practical bearing on the condition of the heart in certain cases of chronic alcoholism; but the Committee decided not to perform them, as it considered the end to be gained did not justify the pain they would have inflicted.

“22. In Experiment No. 178, the case of a dog that had had morphine, remarkable slowing and even temporary cessation of the heart's action occurred again and again at the same moment as the respiration stopped, but the heart invariably recovered itself and began again to beat regularly before any steps were taken to restore the animal, and without any respiration occurring. We find in this case that it was possible to restore the animal, even after unusually long intervals had been allowed to elapse between the cessation of the natural and the commencement of artificial respiration. The failure of the heart, if such it can be called, instead of being a danger to the animal, proved to be a positive safeguard by preventing the absorption of the residual chloroform and its distribution through the system.

“23. The effect of artificial respiration after the natural respiration has ceased is to cause an alternate rise and fall of small amount in the blood-pressure, the trace thus formed on the drum being a coarse imitation, altered somewhat by the shaking of the table, of the natural respiratory curve. The difference consists chiefly in the fact that the artificial rise and fall is more abrupt than in the natural breathing, and that the rise always coincides with expiration or compression of the chest. After artificial respiration has been continued for a certain time the blood-pressure begins to rise again, and a little later natural respiration returns.

“24. The effect of artificial respiration in restoring an animal after the respiration had stopped was always marked. In a few exceptional cases, such as No. 159, a phosphorus dog, and No. 142, a horse which had an enormous overdose, although the artificial respiration was commenced as soon as possible after the breathing was noticed to have stopped, it was not successful.

“25. Complete stoppage of the respiration always means that an overdose has been administered, and the overdose has been so great as to render restoration impossible. It is impossible to say whether, after chloroform has been pushed and then discontinued, the respiration will be restored spontaneously or not, and it is never in any case certain that artificial respiration will restore the natural respiration and blood-pressure, no matter how soon it is commenced after the respiration stops. A good deal depends on the amount of the after-fall; in some cases, even after the respiration has been restored, the pressure continues to fall and respiration again ceases, and artificial respiration then fails. We thus find respiration restored by artificial respiration while chloroform is still being absorbed, and this shows that artificial respiration does not merely pump the chloroform out of the blood, but exerts considerable influence in exciting the natural respiration.

"26. The time which elapses before artificial succeeds in restoring natural respiration varies very greatly. In one case, No. 116, it was continued for eleven minutes before the first natural gasps commenced. This period is undoubtedly prolonged in some cases by a condition of physiological apnœa, which renders it unnecessary for the animal to breathe. Consequently, whenever the pressure rose considerably during artificial respiration it was stopped, and the animal then generally breathed after a few seconds.

"27. The time which may be allowed to pass with impunity before commencing artificial respiration also seems to vary considerably. This point was not particularly attended to in the manometer experiments, except in Experiments 162 and 178, which were instituted to test the truth of the opinion formed by the Sub-Committee, that morphine had some slight action in impairing the efficiency of artificial respiration. In these cases the commencement of artificial respiration was postponed for more than two minutes after respiration ceased, and was successful; but this is certainly far above the average interval that can be allowed with safety. The success of artificial respiration restoring the blood-pressure is, in some cases, very remarkable. In Experiment No. 40, the heart had apparently ceased beating, and the dog was believed by every one present to be dead, and yet recovered with artificial respiration. The success in this instance is due to the fact that concentrated chloroform had been pushed for two minutes regardless of the breathing, and the stoppage of the heart was due to stimulation of the vagus through asphyxia. The animal was therefore easily restored, as he was suffering more from asphyxia than from chloroform poisoning.

"28. It corresponds to these cases, which are so often reported, in which dangerous failure of the heart is said to have occurred some minutes after the administration of chloroform had been discontinued, and which are sometimes restored, and sometimes not, by artificial respiration. There is nothing at all sudden about the failure of the heart in these cases but the attention of the chloroformist, which has been wandering, is suddenly called to the fact that the patient is apparently dead. When the animal was really dead, it was found in some cases that artificial respiration still maintained a small amount of mean pressure in the manometer. In others the pressure seemed to fall to the zero line between each compression of the chest.

“29. The dangers of too vigorous respiration were illustrated in some of the accidental deaths. In one case the liver was badly ruptured, and in another the pleural cavity was full of blood. In three cases, Nos. 80, 92, and 103, rhythmical movements of the diaphragm were noticed after the heart had ceased beating, and after the chest had been opened. It is remarkable that in two of these cases the splanchnic nerve had been divided. The last was a case where chloroform had been injected into the jugular, and in this case there was a synchronous movement of the jaw as well. In all, death and stoppage of the heart had occurred gradually, and in No. 103 the heart was still irritable. These movements cannot be called respiration, though the last gasp of a dying animal—that ineffective jerk of the diaphragm, which is such a fatal symptom, is very likely in many cases a movement of the same character. Similar movements, which were continued much longer, occurred in Experiment No. 104, after the thorax was opened, while the heart was still beating. Still more remarkable convulsions of the muscles of the jaws, ears, and forefeet occurred in Experiment No. 167, in the case of a dog that had been poisoned with nicotine. These movements continued at regular intervals for more than ten minutes after death, and were sufficiently forcible to jerk the handles of a pressure forceps fixed on the end of the tongue off the table at each spasm. In a rabbit, in Experiment No. 153, the auricles of the heart continued to beat very rhythmically for three hours after it was supposed to be dead from chloroform, and its thorax had been laid open. Irritability of the heart after death had been noticed in many cases, but seemed to be most marked in cases where ether had been used.

“30. Chloroform injected into the heart through the jugular vein did not cause clotting of the blood, as was the case when ether was injected.

“31. In the course of the experiments of the Committee various drugs were administered, in order to ascertain if they had any effect in modifying the action of chloroform. The result showed that none of them had any effect in preventing the typical descent of the blood-pressure that occurs when chloroform is inhaled. Atropine, when given in a dose sufficient to paralyse the vagi, of course, prevents the action of these nerves in asphyxia, and, by increasing the action of the heart, it appears to cause a more rapid descent in the blood-pressure when chloroform is inhaled, as has been already explained. Morphine appeared, in No. 162, to render the rise in blood-pressure that occurred when the chloroform was discontinued slower and less complete, and to bring about a more or less permanent condition of anæsthesia. It may be noted that the animal noted in this experiment was a monkey, and in other experiments with monkeys, when no morphine had been given, it was remarkable that the animal, after a few inhalations of chloroform, would often lie quite quiet in a state of semi-insensibility for a long time without further inhalation. Still this condition was much more marked in Experiment No. 162 than in any of the others. No action of this kind was noticed in the dog, No. 178, but other experiments (Nos. 90 and 94) showed that pariah dogs were very indifferent to the action of morphine, and it is probable that the dose of morphine in this case was insufficient to bring about the condition noted in the monkey. The peculiar behaviour of the heart in No. 178 was not the result of the previous administration of morphine, for a similar phenomenon had occurred in other cases (49 and 60), in which no morphine had been given. Experiments Nos. 162 and 178 prove conclusively that morphine had no effect in shortening the period that may he allowed to elapse between the cessation of natural respiration and the commencement of artificial respiration.

"32. The other drugs used had no effect upon the action of chloroform, except when their own special action became the leading feature in the case, as, for instance, during the vomiting from apomorphine, or the convulsions produced by nicotine.

"33. In order to test the alleged danger from shock during chloroform administration, the Committee performed those operations which are reported to be particularly dangerous in this connection—such as extraction of teeth, evulsion of nails, section of the muscles of the eye, snipping off the skin of the anus, &c. In many cases the operation was performed when the animal was merely stupified by the chloroform, and was not fully insensible. In such cases a slight variation in the blood-pressure would sometimes occur, such as one would expect from the irritation of a sensory nerve, or from the struggling that ensued; but in no case in any stage of anæsthesia was there anything even suggestive of syncope, or failure of the heart's action. In thrusting a needle into the heart there was often a momentary, but well-marked fall of blood-pressure; but even this was absent in all other injuries. If chloroform really had any power to increase the tendency to shock in operations, it is impossible to believe that it would not have been manifested to some degree at least in one or other of these numerous experiments. The Commission was, however, not content with this negative result, and determined to ascertain the effect of direct irritation of the vagi during continued chloroform administration. The results of such experiments (Nos. 65, 117, and others), proved that inhibition of the heart's action prevented, rather than assisted, the fatal effects of prolonged chloroform inhalation. An animal that was put into a condition of extreme danger (from which it could only be restored by means of artificial respiration) by inhalation of chloroform for one minute, recovered spontaneously and readily after five minutes of chloroform inhalation, together with inhibition of the heart by electrical irritation of the vagus, carried on spontaneously. In one of these experiments (No. 117) chloroform was pushed for seven minutes, and during continued irritation of the vagus the animals repeatedly came round without artificial respiration. The danger really begins when the irritation is discontinued, or fails to inhibit the heart, and thus enables the chloroform in the lungs to be rapidly absorbed and thrown into the system. This danger is certainly increased by deliberately pumping the chloroform into the lungs by means of artificial respiration; for animals in which this was done, although they showed a tendency to recover when the chloroform and irritation of the vagus were discontinued, afterwards died rapidly.

"34. On another occasion, during Experiment No. 117, the animal was very nearly killed by a comparatively short inhalation of chloroform, owing to the electrodes becoming accidentally short-circuited, and failing to keep up the irritation of the vagus. Something similar occurred in No. 177, the effect of the irritation of the vagus passing off while the chloroform was still being pushed, and thus putting the animal into a condition of extreme and unexpected jeopardy. Nothing could be more striking than these near approaches to accidental death from failure to irritate the vagus efficiently.

"35. Other experiments were made to test the truth of the statement that chloroform increases the action of electrical stimuli applied to the vagus, and showed conclusively that it had no such effect. In one instance only the inhibition seemed to be intensified as the chloroform was commenced, and diminished when it was discontinued. But apart from the fact that the supposed effect ceased much too suddenly, a repetition of the experiment on the same and other animals showed that there was in reality no such effect. The increased inhibition in this instance was due to the chloroformist compelling the attendant who was holding the electrodes to change his position, and thus making him unconsciously apply them more efficiently; when the chloroformist withdrew, they were applied to their former position. This affords an instance of the care that has to be taken in making experiments, if one is not to be deceived.

"36. To test the effect of shock due to vaso-motor change rather than affection of the heart, Goltz's experiment on the frog was repeated on three dogs. In one there was a slight lowering of pressure which was not extensive, and in the others no effect was produced at all. Other operations which seemed likely to produce shock, such as violent blows upon the testicle, were singularly devoid of effect. Failing to lower the blood-pressure by any of these methods, recourse was had to section of the splanchnics; but the low condition of blood-pressure this produced appeared, like stoppage of the heart from vagus irritation, to be a source of safety rather than of danger during chloroform administration. In this connection Experiment No. 111 may be studied. There was not much external hæmorrhage, but the splanchnics were divided—a proceeding which, as is often said, bleeds the animal into his own vessels. The pressure after this was extremely low, but chloroform was repeatedly given, and various other actions taken, and then chloroform had to be pushed on a saturated sponge, enclosed in a cup, for eleven minutes before respiration ceased.

"37. The experiments on dogs that had been dosed with phosphorus for a few days previously show that the fatty, and consequently feeble, condition of the heart and other organs so produced has no effect in modifying the action of chloroform. The ease with which vagus irritation and the Glasgow trace could be produced in these animals by even slight degrees of asphyxia was very remarkable; but this was equally the case in dogs that had been given phosphorus only a few hours before the experiments, and whose organs were not yet fatty. Many of these cases were in the last stage of phosphorus poisoning, and several of their companions died, without any experiment having been performed upon them, before or on the same day as they did. Numerous attempts were made in these animals to produce shock by operations in the recumbent and vertical positions, but without any more result than in those that were healthy.

"38. The truth about the fatty heart appears to be that chloroform *per se* in no way endangers such a heart, but, on the contrary, by lowering the blood-pressure, lessens the work the heart has to perform, which is a positive advantage. But the mere inhalation of chloroform is only a part of the process of the administration in practice. A patient with an extremely fatty heart may die from the mere exertion of getting upon the operating table, just as he may die from mounting the steps of his own hall-door, or from fright at the mere idea of having chloroform, or of undergoing an operation, or during his involuntary struggles. Such patients must inevitably die occasionally during chloroform administration, and would do so even were attar-of-roses or any other harmless vapour substituted for chloroform.

"39. The effect of hæmorrhage was tested by opening the femoral artery and allowing a considerable quantity of blood (8 to 12 ozs.) to escape. An immediate lowering of the blood-pressure results, and this is very slowly recovered from. Such an accident, however dangerous it may be in itself, in no way affects the action of chloroform, except in so far that a patient who has been nearly bled to death would require less chloroform in his system to put him into a state of anæsthesia. The low condition of his blood-pressure produced by the hæmorrhage would tend to prevent the too rapid intake of chloroform, exactly as in the case of cutting the splanchnics.

"40. When the hind feet are lowered on to the floor, so as to place the animal in the vertical position, a considerable fall of blood-pressure in the carotid artery occurs; but when the animal is replaced on the table in the recumbent position, the pressure is fully restored. Various operations were performed on animals in the vertical position, but in no case was anything resembling dangerous shock produced. Inversion of the body, so that the animal stands on its head, has exactly the opposite effect—the pressure rising in the carotid artery and again falling to its former state when the animal is replaced in the horizontal position. Inversion of the body failed to restore an animal that was in the last stage of chloroform poisoning, though it raised the pressure in the usual way as long as it was continued. The change in the pressure of the blood of the carotid, which occurs when the position of the body is changed, appears, therefore, to be due simply to the effect of gravity.

"41. As regards the effect of chloroform upon different animals, it may be said to be the same as far as its anæsthetic action is concerned. There are certain peculiarities in its effect on the respiration and circulation connected with its local irritant action on the nostrils and fauces which are interesting to notice. Thus, when concentrated chloroform vapour is applied to the nostrils of rabbits they hold their breath, and the heart's action is slowed at once. This is always said to be due to reflex inhibition of the heart from irritation of the usual branches of the trigeminus reflected through the vagus, and is by no means peculiar to chloroform, but is produced equally by any irritant vapour, such as ammonia or acetic acid.

"42. In some dogs, and especially those to whom phosphorus has been given, stoppage of the respiration and slowing of the heart occurred immediately after the application of the chloroform to the face or on forcibly pulling out the tongue, and this suggests that the mechanism of cardiac arrest is precisely the same as it is in the rabbit. On the other hand, in rabbits, as in all other animals, it is possible to give chloroform so gently that no spasm of the chest occurs, no reflex action is produced, and then the pressure falls in the same regular curve and with the same succession of phenomena (anæsthesia, cessation of the respiration, and, lastly, cessation of the heart-beat) that was above described as typical of chloroform inhalation.

"43. Goats have a great tendency to hold their breath while inhaling chloroform, and monkeys resemble dogs rather than rabbits, as when ammonia was held before a monkey's nose it did not cause immediate stoppage of the respiration and heart as it does in rabbits.

"44. The experiments with ether show that it is impossible to produce efficient anæsthesia with this agent, unless some form of inhaler is used which thoroughly excludes the air. If an ordinary cup containing a sponge saturated with ether is applied very closely to the face, the animal generally holds its breath and struggles, and we at once get the fall of the blood-pressure and slowing of the heart that invariably occurs under these circumstances. If the ether is continued in this way after the animal has recommenced breathing, a condition of semi-anæsthesia results, in which the cornea is sometimes sensitive and sometimes insensitive, and the pressure rises and falls alternately to a slight amount and forms a wavy trace, which may be continued right round the drum without any particular change. As soon as the air is rigidly excluded, the pressure commences to fall gradually exactly in the same way as with chloroform, and with the same succession of phenomena—viz., first anæsthesia, then cessation of the respiration, then of the heart movements, and finally death. How far this is due to ether, and how far to the results of asphyxia, it is impossible to say, but an exactly similar succession of events can be brought about by making the animal inhale carbonic acid gas alone.

"45. If surgeons chose to be content with a condition of semi-anæsthesia, it can, no doubt, be produced with perfect safety, though with discomfort to the patient, by ether held closely over the mouth. Such a condition of imperfect anæsthesia would never be accepted by any surgeon accustomed to operate under chloroform. If more perfect anæsthesia is required, it can be procured by excluding the air more rapidly; but then there is exactly the same danger as in giving chloroform. How very suddenly and rapidly the pressure may fall and death ensue is well shown by Experiment No. 33. Ether injected into the jugular vein produces a fall of blood-pressure and anæsthesia in the same way as chloroform does; but in all cases in which it is so injected large clots are found in the heart immediately after death. It is interesting to note that Claude Bernard seems to have formed a very similar opinion with regard to ether, as the following quotations from his work, entitled 'Leçons sur les Anesthésiques et sur L'Asphyxie,' published in 1875, show. The first quotation (page 50) is as follows:—'Aussi un certain nombre de chirurgiens proposèrent-ils d'abandonner le chloroforme pour revenir à l'éther, dont l'usage paraissait moins à craindre. Aujourd'hui encore, les chirurgiens de Lyons emploient préférablement l'éther. On croyait le chloroforme plus dangereux que l'éther parce qu'il était plus actif; mais, en réalité, la fréquence relative des accidents par le chloroforme tenait peut-étre tout simplement à ce que c'était cet agent anesthésique qu'on employait dans l'immense majorité des cas. Plusieurs discussions ont été provoquées par les partisans de l'éther, sur tout par les présentants de l'école de Lyons, et il a été constaté que l'éther, lui aussi, avait produit un certain nombre d'accidents mortels. Les deux agents anesthésiques usités peuvent donc, l'un comme l'autre, entrainer quelques risques de mort, et la chirurgie humaine a conservé presque partout le chloroforme, dont l'action est plus rapide et plus complète.' The second quotation, to be found on page 101 of the same work, runs :—"Quant à l'éther et au chloroforme, l'action est à peu près la même au point de vue physiologique, sauf une différence d'intensité en faveur du chloroforme, ce que nous fera généralement employer ce dernier corps de préférence à l'éther.'

"46. The A. C. E. mixture, given gently with plenty of air and the other conditions mentioned before under chloroform, produces the typical chloroform trace. Given freely to a struggling animal, it can produce a very rapid and dangerous fall of blood-pressure. In Experiment No. 52, Fick 4 shows very perfectly the effect on the heart of holding the breath."

(*To be continued.*)

An Atlas of Illustrations of Pathology. Fasc. VIII. Diseases of Brain and Spinal Cord. Plates XXXVI. to XLI. London: The New Sydenham Society. 1891.

NEW ground is broken in this fasciculus, and we have a first instalment of beautifully-coloured plates illustrating affections of the central nervous system. Several of the plates are copied from Auvert's atlas; others are derived from Mr. Hutchinson's portfolio.

Plate XXXVI. depicts, in Fig. 1, a hydatid cyst in the posterior cornu of the right lateral ventricle.; and in Fig. 2, an abscess in the right cerebellar hemisphere.

Plate XXXVII. illustrates cerebellar hæmorrhage, cerebellar tubercle, and a large tubercular mass situated between the pons and cerebellum.

The three figures in Plate XXXVIII. illustrate the effects of injuries to the spinal column, attended by contusion of the cord; and Plate XXXIX. represents a tubercular tumour on the spinal dura mater. Other morbid conditions of the spinal cord are illustrated in Plates XL. and XLI.—viz., cartilaginous deposits on the spinal arachnoid, myelitis after concussion of the spine, tubercle in pia mater of the cord, and a fibrous tumour in the cauda equina.

All the plates are of a high order of excellence, but the pathological details accompanying them are sometimes scanty and imperfect.

The Memoirs (chiefly Autobiographical), from 1798 *to* 1886, o
Richard Robert Madden, M.D., F.R.C.S.; formerly Coloni
Secretary of Western Australia; H. M. Commissioner of Inqui
into Slave Trade, West African Settlements; Author of "Trav
in the East," "Memoirs of the Countess of Blessington," "Li
and Times of the United Irishmen," &c. Edited by his so
THOMAS MORE MADDEN, M.D., F.R.C.S.E. London: War
and Downey. 1891. 12mo. Pp. 328.

WE thank Dr. More Madden for these Memoirs of his disti guished father. We have read them with great, though mainl unprofessional, interest. Indeed, of medical material, such justifies a notice of the book in the pages of a medical journ there is but little—Dr. Madden's career having been soci literary, and political, rather than medical. The account of t earlier stages of his professional education and wanderin remind us irresistibly of the adventures of Gil Blas; but 1823 he became a regular member of the profession, taking t diploma of the London College of Surgeons and the license the Apothecaries' Company. From this time he combined som what desultory medical practice with journalistic and oth literary work, and with unceasing efforts in the cause of libert more especially on behalf of the negro slaves and the Australi aborigines. With this part of Dr. Madden's long and acti life it is not within our province to deal; but we recommen this account of it for perusal as strongly as we can. We sh be content to notice briefly some portions of the narrative whi exhibit the subject of it, not as the writer or the politician the philanthropist, but as the physician.

In 1824 Dr. Madden tried Constantinople as a field for medic practice, but the methods did not suit him and he left it soo His account of his experience there is most amusing. Ea "doctor"—there were at that time about fifty of them, most from Italy or Malta, of whom perhaps five had received a medic education—maintained a Greek dragoman, whose business it w to tout for patients and extol his employer's skill. Dr. Madde jackal taught him that the golden rules of Constantinopolit practice were three: 1, fee before advice; 2, ask no questio of the patient; 3, give no intelligible answers to the patien friends. Symptoms were to be sought in the pulse alon prognosis was to be limited to "Inshallah" ("please God!")

doubtful, and "Allah kharim" ("God is merciful") in desperate, cases. Thus instructed, the expectant practitioner took his seat in a coffee-shop, where he overheard his *fidus Achates* tell the surrounding Turks how he had seen his doctor, a few days before, remove and scrape a patient's liver, how the sick man recovered—and how the grateful patient had paid a handsome fee of five purses. The result was satisfactory.

> "A well-dressed man who had been sitting at my side in silence for half an hour, at last recollected that he had a wife or two unwell, and very gravely asked me 'what I would cure a sick woman for?' I inquired her malady. 'She was sick.' 'In what manner was she affected?' 'Why, she could not eat.' On those premises I was to undertake to cure a patient who, for aught I knew, might be at that moment *in articulo mortis*. I could not bring myself to drive the bargain, so I left my enraged dragoman to go through the pleasing process. I heard him ask a hundred piastres, and heard him insist by his father's head and his mother's soul that so good a doctor never took less. However, after nearly an hour's haggling, I saw fifty piastres put into his hand. I visited my patient, and had to ascertain her disease as well as I could with a door between us, she being in one apartment and I in another; the door was ajar, and through this her head, enveloped in a sheet, was occasionally projected to answer my questions. I, however, was enabled to collect enough in this way, and from the attendants, to cause me to suspect that she had cancer. I did all that, under such circumstances, I could well do. I gave her an opiate; and after smoking the inevitable pipe and drinking sherbet, took my leave."

In another case the patient was a pasha of high rank surrounded by doctors in consultation. A Turkish priest made an oration. He had consulted the Koran and found that the word "honey" was repeated thirty-six times. His Highness had been thirty-six days ill. The inference was obvious. Let the pasha have thirty-six drops of "oil of wax" every thirty-six hours. The other consultants acquiesced, as discussion was forbidden, and pocketed four dollars each. The patient died. Our doctor, as he withdrew, remarked to an Armenian *confrère* that the proposed remedy was unusual. The other looked round cautiously and whispered "poison;" the bulk of the sick man's property being left to a mosque. Dr. Madden went back (in spite of his dragoman's remonstrances) and warned the attendants that the man would die if he took the medicine. It became clear that such unprofessional conduct would not do in Constantinople, and Dr. Madden gave up his practice.

Changing the venue to Alexandria, Dr. Madden, in 1825, came in for a severe epidemic of plague, of the extreme contagiousness of which—although he himself escaped completely—he gives some instances. He visited a patient said to have had apoplexy, but really suffering from plague. On his return he changed his clothes and gave those he had taken off to his Maltese servant to hang up. Next day but one the latter was taken ill of the disease. On his way to hospital he called in to see his brother; *he* was seized three days later, and being bled according to the ordinary routine practice, died *secundum artem.* Dr. Madden adopted a stimulant plan of treatment, with cold applications to the head and hot cataplasms to the buboes, and 75 per cent. of his patients recovered. He attributed his own freedom from infection to his insisting on free perflation of the wards, to wearing an impervious oilskin garment, to having eaten or taken a glass of wine before visiting a patient, and to smoking incessantly while he continued in presence of the sick. Though he thus (as he supposed) escaped plague, he came near succumbing to a combined attack of dysentery and an Alexandrian doctor. In despair he ordered his doors to be closed against his medical adviser, took scruple doses of calomel for three successive days and got well.

In 1822 he was practising at Naples, and he tells us an amusing episode of his Neapolitan experience. One of his patients was Lord Charles Murray, son of the Dowager Duchess of Athol, who was mentally deranged after an attack of brain fever. He was anxious to visit an old friend, the Marchioness of Anspach, and his physician accompanied. For a short time the visit proceeded quietly, but the conversation became explosive, and Dr. Madden with some difficulty got his charge to the gate. The Margravine accompanied them, and then Lord Charles "insisted on showing her a new mode of entering a carriage, which he particularly recommended her to adopt; he then made a rush towards the carriage-door, and, putting his hand on the window-frame, made a jump of that kind which harlequins and clowns are wont to make through panels in pantomimes, and fairly launched the upper part of his body through the window, leaving his long legs on the outside, kicking furiously in all directions." It was necessary to enter the carriage by the other door and pull the patient through. Lord Charles recovered his reason; but died in 1824, at the age of twenty-five, in Greece, after suffering great privation and fatigue in the cause of Grecian liberty.

In 1836 Dr. Madden visited New York, for the second time. He visited the State Prison, then on Blackwell Island; and we quote his description of the system of solitary confinement then practised:—

> "I was painfully impressed by the rigour of the solitary confinement, which far exceeded anything of the kind I had ever seen elsewhere. In one of the cells I saw, through the small grated aperture in the door, a young Englishman who had been sentenced to five years' solitary confinement for forging American bank notes. This prisoner had already been in his dismal cell—7½ feet by 5—three years, and had two years more to remain there. I asked the chief warder if this unfortunate man was allowed to have any book, such as a prayer-book or a bible, in his cell. 'Nothing of the kind; no sort of amusement is allowed,' was the answer. 'Do you mean to say the bible or a prayer-book would be considered an amusement?' I asked. 'The reading of it would serve to distract the mind,' said he, 'and therefore all books are forbidden." The same official told me he had been five years in that prison, and had not known a single case of madness occurring there, which, I confess, much surprised me; nor, according to him, had any prisoner died whilst under solitary confinement during that time."

Before concluding our notice of Dr. Madden's Memoirs we must give an example of Poor-law dietetics, which is, we fear, typical of Bumbledom in the sad years which followed the Great Famine. In 1850, in the Kilrush Union, the average weekly cost of a pauper was 10½d., hospital and infirmary patients included. Excluding these, each pauper was fed for less than 8d. per week. What was his diet? Our author compares the Kilrush dietary with that of St. Pancras Workhouse, justly premising that "the present dietary of the English workhouses has been reduced to the smallest amount of nutritious food deemed sufficient to maintain life in health and strength." The following is the amount of food considered sufficient for this purpose for one week by the Kilrush Board of Guardians in 1850:—Bread, 7 lbs.; Indian meal in stirabout, 3½ lbs.; "soup," 14 pints, each pint containing 2 oz. oatmeal and 2 oz. vegetables; cocoa, 3 pints. The St. Pancras dietary included 18 oz. of meat, 2½ lbs. of vegetables, 14½ pints of milk and 29 oz. of meal in porridge, 12 oz. of pudding, 6 oz. of cheese, and 11 pints of beer. No meat, no milk, no vegetables, no cheese, no beer, in Kilrush!

and the bread, "composed of equal parts of rye a black, clammy, badly baked, unsightly, and dist unfit for human food. Even in the overcrowded i medical officer reports, the milk supply was 150 t short. It is needless to add that the mortality a poor starved creatures was appalling.

We repeat that we thank Dr. T. More Madden tracts and abstracts from his father's Memoirs; a have thanked him more warmly if the work had done. We get a great deal too much poetry, in c vion of the Horatian dictum—

> Mediocribus esse poetis
> Non homines, non di, non concessere colum

while prose narrative, which we should have rea interest, is excised because the story is told in som long since out of print. As to the printing of th most discreditable to editor, publishers, and printer whom have the good taste to conceal their name abound on almost every page.

The Retrospect of Medicine. Edited by JAMES
M.D., London. Volume 104, July–December, 1
January, 1892.) London: Simpkin, Marshall, H
& Co., Limited. 8vo. Pp. 432.

THIS old-established and ably-edited half-yearly tains the high reputation it has long enjoyed as a f of contemporaneous medical and scientific progress

The present volume consists, as usual, of a synop alphabetically and containing an abstract of the pri which were published in the Medical Journals du year, and of sections on Medicine, Surgery, and O Gynæcology.

The Editor has done his work well, and we con on the green old age of "Braithwaite's Retrospect tion which has stood its ground as a book of refe tremendous odds in these days of modern medical

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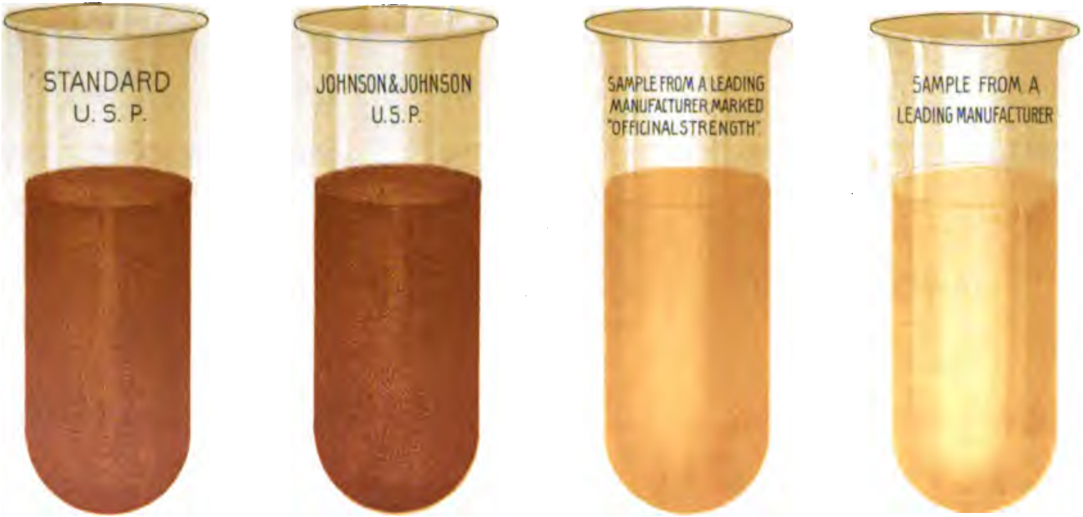

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General Secretary—**W. Thomson**, F.R.C.S.I.

SECTION OF STATE MEDICINE.

President—**E. MacDowel Cosgrave**, M.D.
Sectional Secretary—**Ninian Falkiner**, M.B.

Friday, February 19, 1892.

The **President** in the Chair.

The Control of Inebriates.

Dr. Cosgrave read a paper on the above subject. [It will be found at page 177.]

Dr. Davys considered Dr. Cosgrave's paper a valuable contribution to the treatment of the inebriate. With reference to the second class referred to by Dr. Cosgrave, the intermittent drunkard, Dr. Davys considered (and quoted cases in support of his assertion) that the only successful treatment or cure of the intermittent drinker is, the moment his family all on their physician to prescribe for the inebriate, for the doctor, with the approval of the family of the patient, to employ a strong male-ttendant to wait on the inebriate, and by physical force prevent him aking any alcohol, the patient to be kept in his house. Much greater rivacy is thus observed than by sending him to a Retreat; and having o bring him before a magistrate, as suggested in Dr. Cosgrave's paper, s obviously objectionable. The adoption of the course suggested by Dr. Davys effects a cure so far in about three days as to enable the nebriate to resume, in perfect sobriety, his ordinary avocation. The ame course should be adopted when, at the succeeding period, sometimes

in two or three months, the patient breaks out again.
returning to his sober state, fully approves of the co
physician.

Mr. Edgar Flinn thanked Dr. Cosgrave for h
paper. He quite agreed that the regulations for ge
into Retreats under the Habitual Drunkards' Act
stringent. They should be more relaxed, and suc
much more availed of. It was a pity that the Habit
was not applied to Ireland, for it certainly was requi
most beneficially. Retreats in England for habitual
in some instances, but in Mr. Flinn's experience the
cure, unless the patient was committed to the Retrea
Persons addicted to drink were a class very difficult
the radical cure, no doubt, was to remove them to so
would be prevented from obtaining drink—in fact, in s
might with propriety be placed in asylums.

Dr. J. W. Moore instanced three cases of intermitt
had come under his observation, and expressed the op
restraint was a much more reliable means of treatment
remedies. He alluded to the unscrupulous way in
alcoholic beverages supplied the unhappy victims of i
or spirits. He considered that the use of the ter
"bestial," in connection with drunkenness, was a
creation. The whole question of the control of in
worthy of the attention of the legislature of the count

Dr. Thomas Donnelly agreed with the previous
value of physical restraint in the treatment of in
necessity which exists for greater power in using it.

Dr. Cosgrave, in reply, said that intermittent i
doubtedly the most interesting form from a scientif
Dr. Davys' treatment of restraint by a stalwart atte
the patient would submit to it; but there was no pow
to do so. Easy admittance into an inebriate asylum f
exactly meets such cases, affording a chance of tid
Inebriety often caused neuroses in the descendants,
families being affected with hysteria, epilepsy, inebri
case he (Dr. Cosgrave) had seen inebriety once in thre
lady, aged nearly seventy, suffered from intermittent att
died of *delirium tremens* at about thirty, and her daught
the influence of drink when only fifteen years old. T
Somerset House authorities show that alcoholic drink
adulterated, so the evil done must be laid to the char
itself.

Pollution of the South-eastern Foreshore of Dublin.

Mr. Edgar Flinn read a paper on the pollution of the south-eastern foreshore of Dublin.

He pointed out that the pollution at Dublin, extending from Merrion to Kingstown and Sandycove, not only existed but was increasing, and that although several partial attempts had been made to remedy this state of affairs, nothing radical had been effected; that this state of sanitation, at places claiming to be health-resorts, was particularly reprehensible.

There are eight main sewers and thirty minor ones at present discharging into the sea at this locality. He advocated a deep-sea outlet, such as Llandudno possesses, which has been so advantageous to that town. In addition, he recommends an intercepting sewer, in which the sewage is to be collected and then discharged at about 600 feet from the shore, at a depth of 30 feet below the level of sea water.

He concluded his paper by a criticism of the present methods of disinfecting sewage, and referred to that of Messrs. Adeney and Parry, known as the oxygen process, which has the advantage of precipitating the solid matter of sewage without the addition of precipitative chemicals.

Dr. Donnelly remarked that, as precipitation has been so successful in many places, it could be adopted at the Salthill outfall, and avoid polluting the sea so close to the best bathing-place near Dublin—that is, Sandycove.

Dr. Cosgrave strongly urged the importance of not carrying out new drainage into the sea, but of substituting precipitation as used so successfully at Drumcondra, and as about to be introduced in Dublin. At Llandudno the drainage is successful—for Llandudno, but not for the Conway estuary, which, fortunately, is not fringed by houses as Kingstown and Dalkey are. Messrs. Parry and Adeney's method seems the most promising.

Dr. Parsons asked if any bacteriological investigation of the effluent before and after precipitation had been made, and if so with what result?

Mr. Flinn replied in the negative.

Thursday, March 3, 1892.

The **President** in the Chair.

The Present Position of Dispensary Medical Officers in Ireland, and Suggestions for the Removal of their Just Grievances.

Dr. Thos. Donnelly read a paper on the present position of dispensary medical officers in Ireland, and suggestions for the removal of their just grievances. [It will be found at page 275.]

Residential Disabilities of Medical Officers in Rur

Mr. P. M. Laffan read a paper on the residenti medical officers in rural districts. [It will be found at

Mr. Wm. Thomson said he had no criticism to off because he concurred in its general tendency and recom referred to the habit of signing tickets *en bloc*, and menti of the Local Government Board in their instructional 1885 in these words :—" Persons empowered to issue ti relief under the Medical Charities Act, cannot delega others. Such tickets should not be signed in blank, an up by other persons." Yet recently the same Board ha case of the Castlereagh district of the Belfast Union, which they condemned in 1885 was not illegal. He c the proposal in the Local Government Bill to transfer th appointments to the County Councils, and urged the d to consider the effect of this intended legislation. As to he pointed out that it would not be more costly, that efficient, and that entrance by examination would secur sional men regardless of other considerations.

Dr. Finny fully concurred in the importance of the s by the papers which had been read, and considered tha was to be measured not only from the point of view of t law medical officers, but from the wider grounds of medi collegiate status. As President of the Royal College reiterated what he had stated on other occasions—tha the College and of its Licentiates were intimately co status and relations of the poor-law medical officer, a serious fact that owing to the real and most serious dispensary medical men, the best men who take the College are debarred from taking office in this count have to seek their living in the mining and manufac England or in the Colonies. Until these grievances state of things will hardly be altered, and the effort medical doctors to have them remedied he could pro supported by the influence of the Royal College of Phys be well, however, that a concentration of effort shou while the grievances are many and real, in the forefro out the question of "Superannuation;" and he felt t effort be brought to bear on the Government on this p ment would grant it—and one at least, and might he grievance, would be removed.

The President mentioned that when acting as *lo* dispensary medical man he was sent a red ticket, direc the warden who signed the ticket. He also expressed the indebtedness of the Section to Mr. Laffan for coming up and laying his valuable paper before the Academy.

Dr. J. W. Moore referred to the very unsatisfactory position in which the Dispensary Medical Officers of Ireland, acting as District Medical Officers of Health under the Public Health Act of 1878, were placed, mainly in consequence of the Orders to sanitary authorities issued by the Local Government Board under the Act in question, particularly as regards the question of salary. The duties required of the District Medical Officers of Health were irksome and onerous, and yet the Local Government Board in 1874 sent a General Order to the sanitary authorities throughout the country to the effect that the salaries paid to the medical officers of health should not exceed one-fourth of the amount of their salaries as dispensary medical officers. This objectionable maximal scale of remuneration was indeed withdrawn *in name* when the Public Health Act of 1878 became law; but no material change for the better was effected. In conclusion, Dr. Moore alluded to the provisions of the Local Government (Ireland) Bill, 1892, which touched upon the interests of the Dispensary Medical Officers acting as District Medical Officers of Health.

Mr. P. M. Laffan said:—I quite agree with Dr. Donnelly that it would e very desirable to have a definition of a "poor person" within the eaning of the Act; but I think the State could not give a narrow efinition, as in a matter of charity and philanthropy it is bound to regard ith a more paternal solicitude the interests of the larger number of its ubjects than those of a limited portion of the community such as ispensary Medical Officers; it is bound to be broad rather than con- cted in the interpretation it may put on this branch of legislation, and oking at the subject without prejudice we cannot fairly demand more an secondary consideration. Therefore it is incumbent on us to advocate ch rules as will counteract any vagueness that may still be permitted continue as to the persons legally entitled to gratuitous medical relief the public expense. This, I believe, can be done by limiting the mber of issuers of tickets, and allowing only responsible persons to sess the power of distributing them, and also by increasing the facilities cancelling those given to non-qualified recipients. To Dr. Donnelly's mirable suggestions in this direction, I think this one might be advan- geously added:—That a list of the names of the cancelled persons be ted in a conspicuous position on the outside of the dispensary after every eting of the Committee, but that before doing so the Hon. Sec. should d a notice to them that their names would be published on the "List the Prevention of Imposition" on a certain day, unless they produced a tificate from the doctor that he exonerated them from further responsi- ty, or they proved their inability to pay to the satisfaction of the

Committee. This, I believe, would have a very salut
[illegible] the medical attendant rather than have th
[illegible] Dr. [illegible]'s suggesti
rate should be given to dispensary officers, if carrie
[illegible] of the principle that the reward should be
[illegible], and though some difficulties would at first be
[illegible], this would soon disappear; still I confe
of salary based on the annual number of miles travelle
to me to be more free from objection.

Leave of absence.—This scarcely demands any ob
without saying that a man working day and night-
machine—must at least once a year require a tho
mind and body, and I believe the public would gain
it, as the holiday-seekers could combine pleasure wit
they would derive both by visiting the great hospitals at
in addition to physical benefit from variety of scene;
with their minds expanded after drinking, so to spea
fountains of knowledge. The double expense—the pa
tenens at home and the travelling outlay—deters
from taking a respite from their labours that would
advantages for themselves and their patients.

The suggestion that all the medical officers of the
ex-officio attendants of the Workhouse Hospital within
original proposal, and has to recommend it—

1st. It would bring the medical men into closer
other, and afford opportunities for interchange of opin
medical matters.

2nd. It would be of unspeakable advantage in the w
hospital experience. The dispensary work of the dis
doing both duties could be lessened by his bringing in
long distance, as it is a well-known fact that where
dual position he can more easily induce patients to go

3rd. It would stimulate a certain amount of hea
encourage scientific research and study.

As regards making us direct Officers of State, Mr. Th
me in reminding you that the Irish medical officers ar
paid out of Government funds. This being so we are
way towards being civil servants, and are not logically
fore in requesting to be placed on the same lines as
holidays, &c., with those who are, so to speak, only a
us; and when our salaries will be increased by another
the Treasury—which we hope will be one of the outcom
agitation—we shall be well advanced on the road, and
perseverance, with unity and time, will soon bring us to

ı special State department, presiding over the medical officers of the ountry and sanitarians. This subject is so extensive in itself that if reated with the importance it demands, an entire night for its discussion n this Academy would scarcely exhaust its many phases.

SECTION OF SURGERY.

’resident—H. G. Croly, President of the Royal College of Surgeons in Ireland.

Sectional Secretary—R. L. Swan, F.R.C.S.I.

Friday, March 4, 1892.

The President in the Chair.

Recent Specimens.

Recent specimens were exhibited by Mr. Wheeler, Mr. Thomas Myles, nd Mr. Pratt. The President exhibited some living examples of results f excision of elbow. Mr. Swan: some examples of rectification of ggravated equino-varus by the section devised by exhibitor.

The Treatment and Origin of Hammer-toe.

Mr. Swan then read his paper on the treatment and origin of hammer-oe, and demonstrated that the skeleton was at fault. He deprecated the reatment usually recommended, of division of certain of the soft tissues. rom a number of facts which he stated as to the functions of the toes ı certain races, and the functional adaptibility of the second toe, and om a comparison of the feet of anthropoid apes with the lower and igher types of the human foot, and from a review of the embryological evelopment of the human foot, he refers the distortions of equino-varus nd other congenital aberrations from the higher type—hammer-toe inluded—to either an arrest of the evolutionary process, or to a reversion › a lower type, with an unequal development of the osseous and soft ssues.

Mr. Hamilton considered the Academy was indebted to Mr. Swan r his paper, which was characterised by originality and research, as ell as by practical usefulness. The surgeon was apt to follow routine, nd he had himself on many occasions divided the flexor tendons for this ffection. He had no doubt, from what he now saw, such teaching was rroneous. He had himself been struck with the functional usefulness cquired by the toes, as illustrated by the divers in the Bay of Naples.

Mr. T. Myles congratulated the Section on the pleasure and benefit ıey had derived from listening to Mr. Swan's very exhaustive paper. he speaker, however, disagreed with some of Mr. Swan's statements, nd considered that his deductions were hardly warranted in their

entirety. For instance, the second toe, normally, was r
always longer than the first. Mr. Myles pointed out that i
under discussion the position of flexion of the second toe
of removing the broad anterior extremity of the phalanx
the first and third, and was, in fact, nothing more than
effort to diminish the effects of the crowding together
tight boots. If Mr. Swan's theory were true, it ought
common amongst people who do not wear boots as amongs

Mr. Wheeler thought that the last speaker argued fro
to the universal. In any cases he had seen of hammer-to
believe that it was congenital. On two occasions he e
and placed the toe in the straight position.

Mr. Pratt referred to the evolutionary development
in the feet of birds as having some bearing on Mr. Swa
of the origin of this affection.

The **President** also spoke.

Some Remarks on Excision of the Elbow-Joi

The **President** (Mr. Croly) made a communication on e
He performed the operation close on fifty times in hospi
practice. He first described cases suitable for excisio
last thing that entered his mind in elbow-joint disease w
Fortunately in disease of the elbow the humerus was m
diseased than the bones of the forearm. He exhibite
excision in the Library before the meeting. One on a n
about six years ago for ankylosis in bad position. The
years of age, has quite as good use of the arm operated
The second case, a sailor, R.N., was operated on over
His arm is quite as useful as the other; he can row in
members examined both cases, and were surprised at the
arms.

The President, in describing the second case (the sail
the disease in the joint followed a fall on the deck of H.M
little was the joint altered that doubts were expressed as
and the patient was treated as a malingerer for seven m
return home he was advised to consult the President.
little swelling in the joint, but a peculiar "elasticity"
bones of the forearm against the arm, also on lateral m
joint was found extensively diseased when laid open.

He prefers the single incision, which he makes about
He recommends the arm to be held as straight as poss
operation, and frees the structures on the external side of
The ulnar nerve, in diseased joints, in his experience is
seen. He removes the olecranon first, next head of rad

the condyles. He laid particular stress on the importance of removing a portion of the *shaft* of the humerus in addition to the condyle, otherwise a stiff joint would be sure to follow.

He exhibited a number of specimens of his cases from the Museum of the College, showing the amount of bone removed. He also exhibited a radius and ulna from the Bone-room of the College, showing the insertions of the biceps and brachialis anticus, the latter insertion being sufficiently low to allow of the removal of the coronoid process. He laid stress on the importance of early passive movements. If sufficient bone is removed there is no fear of ankylosis. In his experience arms, after excision, are not really useful before the expiration of six months to a year.

Mr. Wheeler said that he had also cases in which there were scarcely any symptoms to warrant operation as far as external appearances. Some of these cases he described under the head of silent caries. As the President stated that his observations were addressed to the junior men present, and as most of the observations made were well known—in fact, might be called standard rules—he would only allude to one or two points. First, the use of Esmarch bandage in excisions of joints. Some ten years ago he read his condemnation of this bandage; in excisions of joints such as the shoulder, elbow, knee, it was not useful, and he advocated its use in excision of bones such as the bones of the foot, but his experience many years ago taught him that secondary hæmorrhage was prone to follow its application when used in joint excisions. He did not agree that the transverse incision, made in what is termed the H incision, opened when passive motion was set up, for it was below the line where flexion took place; he invariably adopted a single incision. In bony ankylosis he had practised, on one occasion, the operation suggested by Mr. Butcher, but never performed by him. Like Adams' operation, which was a modification of Mr. Butcher's, bony ankylosis always followed, for the sawn bones remained too close—the only difference being that a straight ankylosed elbow-joint could be converted into a flexed, stiff joint, which, in his opinion, was nearly as useless. The last three cases of excision of this joint he had performed, were for ankylosis in the semi-flexed position.

Mr. Barton said that in his experience excision had rarely to be performed for ankylosis in the flexed position. He endorsed what the President had stated as to the time required for a useful cure, and believed twelve months necessary.

Mr. Myles was surprised to hear the last speaker say that ankylosis was not necessary for flexed positions of the forearm. In his opinion the traditional belief that a flexed position of the forearm, that is, nearly a right angle, was wrong. He had fastened his own arm at a right angle in plaster of Paris, and found it was quite useless to him.

The **President** replied.

SECTION OF MEDICINE.

President—J. **Magee Finny**, M.D.; President of the R
Physicians of Ireland.

Sectional Secretary—A. N. **Montgomery**, M.R

Friday, March 11, 1892.

The **President** in the Chair.

Living Specimens.

Dr. Walter G. Smith exhibited a man with Universa

Dr. H. C. Tweedy showed a case of Dermatitis Exfol

Case of Stricture of Sigmoid Flexure of Col

Mr. J. P. Doyle read a paper on a case of stricture
flexure of the colon in a man, forty-five years of age, who
years suffered from constipation, followed at times by sl
of the bowels. He was subject to frequent attacks of co
pain, with soreness and tenderness over the left iliac regio
at times quantities of clear or red-stained gelatinous mucus
of obstruction with peritonitis occurred. The *post morte*
revealed a rupture below and at the seat of a cicatricial
sigmoid flexure of the colon. General peritonitis existed
the intestine at the stricture would admit about a No. 10
descending colon was thickened, purplish red, and distende
fæces which pressed against the opening in the strictured
gut, but did not escape into the peritoneal cavity.

The **President** asked Mr. Doyle as to the pathologica
stricture—as to whether it was the result of ulceration, su
to occur in dysentery—or of epitheliomatous cancer.
that the term of stricture should be limited to these tw
conditions; or did Mr. Doyle consider that the stricture
chronic peritonitis of which he spoke.

Dr. W. Thornley Stoker having spoken,

Mr. Doyle briefly replied.

A Case of Opium-Poisoning.

Mr. J. J. Burgess read a paper on the above subjec
found at page 270.]

Dr. Falkiner gave an account of two cases of opium-p
had come under his notice. In one a young man sufferin
had drank about 5 oz. of a lotion containing 15 grains of
each ounce, or 150 grains of crude opium. He was not u

until 13 hours after the poison was taken, and was not considered safe until 16 hours after the treatment commenced. The interrupted current was of great service. The second was a case of a lady who was suffering from severe neuralgic pains, and a uterine tumour, who received three hypodermic injections in the space of six hours of ⅙-grain morphin in each. The lessons to be drawn from these cases were that, in the first case, a practitioner had left it as hopeless before treatment was commenced. In the second case the hypodermic administration had been left in the hands of a non-professional person.

Dr. Joynt mentioned the case of a Parsee lady whom he had been called to see some years ago in Surat, in India. The lady was about seventeen or eighteen years of age, and had swallowed about an ounce of Collis's chlorodyne. Before Dr. J. saw her she had been treated by a Parsee medical graduate, who had employed all the usual remedies laid down in medical books—stomach-pump, electricity, flagellation, and artificial respiration, &c. After again in vain repeating some of these, and the comatose condition in which he found her progressing steadily, he had recourse to cold affusion, in the form of a stream of iced water slowly poured on the patient's head from a height of several feet. After a considerable time she responded to this treatment, which was carried out more or less continuously for about two hours, when she so far recovered as to be able to swallow a cup of strong coffee. Perfect recovery resulted. The poison had been swallowed about four hours before Dr. Joynt saw her.

Dr. Little considered that the expediency of relying on atropin as n antidote to opium-poisoning was very doubtful. It did not appear o have done good in Mr. Burgess' cases. He thought the communicaion most valuable as showing we should not give up any case of opiumoisoning until life was extinct. The remedies which appear to have one most good were the persistent artificial respiration and external imulation. In a case which he had treated many years ago life was ved apparently by keeping the patient awake by slapping various parts the body exposed for the purpose with a spatula dipped in very hot ater and the use of hot coffee by enema and by the mouth. He doubted e safety of using the faradic current to the head, but found it in the se he had himself treated useful when applied to external parts as a ode of waking up the patient.

Dr. Hastings Tweedy said that he rose with a certain amount of ffidence to speak about a case that was admitted into Steevens' Hospital o years ago, when he was house-surgeon there. His case, unlike the her cases cited, died, though the dose taken was less than that in r. Burgess's case. Having heard the very instructive case of recovery could not attribute his unsuccess to anything but to the more thodox methods he employed in comparison to Mr. Burgess. The

stomach was washed out, ether was not injected, atropin
a much larger extent than in this case. The patient wa
o'clock in the afternoon. At Dr. Hayes' suggestion, we ke
respiration until 10 o'clock the following morning.
breathing at the rate of 12 per minute. She continued to
until 2 o'clock, p.m., when she suddenly died 23 hours
admitted.

Dr. Hayes said that, having seen the patient men
H. Tweedy, he was strongly of opinion that the inject
distinctly benefited the patient, and he thought that it
gretted that in that case the artificial respiration had n
persevered in.

Dr. Walter Smith remarked upon the wide limits
the smallest fatal dose of morphin from the maximal do
recovery has followed, the ratio being 100-1. The use
the treatment of opium-poisoning is still an undeterm
when it appears to do good it is probably by its action a
stimulant. The state of the respiration is a better test th
of the pupil. It is strange how conflicting are the view
cretion of morphin, an important point both in toxicolo
medicine. It seems to be now established that morp
excreted into the stomach and bowels, and so cast ou
Very little goes out in the urine.

Dr. H. T. Bewley said he had seen a case of morph
which the breathing became exceedingly shallow and feebl
became slower until the respiratory movements occurred
times a minute. He injected atropin several times, al
in all, after which the breathing became better and stronge
in frequency up to 6 or 7 times a minute. The patient di
was dying of liver disease at the time she took the morph

Dr. Finny, alluding to the question of the antagonism
of morphin and atropin, referred to a communication he
that subject before the Medical Society of the College of
twenty years ago, in which he illustrated—and as it seem
tively—the important curative antagonism of morphin in a
poisoning, while he questioned the reliability of the treat
poisoning by the hypodermic use of atropin.

Mr. Burgess, in reply to Dr. Joynt, said he believed i
but not in a state of collapse, having often used them in
alcohol-poisoning with success. To Dr. Little—He confes
nin injections did not occur to him until afterwards, but h
when the breathing became regular this would have done e
To Dr. Tweedy and Dr. Hayes—The atropin was not pu
because—(1) It had no effect on the respiration or heart d

cation over three hours. (2) He shrank from introducing a second poison into the system when he was not deriving any benefit from the quantity already given. He was glad to find that Dr. Smith and the President agreed with his views about atropin, not being what it is represented to be, an antidote for opium.

The Section then adjourned.

MALTHUS.

In these days of hurry, when of making of new books there is no end, nobody reads the old ones; and the views of the older authors are liable to perversion, sometimes to a ludicrous extent. None of the elders has suffered more in his reputation from such ignorance and perversion than the worthy clergyman, Malthus. In his case misrepresentation probably reached the lowest deep of absurdity in the July number of the American *Archives of Obstetrics, Gynæcology, and Pediatrics*, where its readers are gravely informed that "Thos. Robert Malthus, the scientific expounder of the principle of population . . . . . conceived the idea of ligating the vas deferens in order to destroy fruitful marital relations" (p. 415). In a recent issue of the *Chicago Medical Recorder* Dr. W. H. Washburn, of Milwaukee, stimulated by horror at this audacious calumny, devotes an interesting article to an attempt to rehabilitate Malthus. He shows that the leading idea in Malthus' teaching was one which everyone admits in theory—*that no man has a moral right to marry until he is able to support a family.* As to "fruits of philosophy," ligation of vas deferens, and such like procedures, he repudiates them with disgust. In one of his works he says:—"I have never adverted to the check suggested by Condorcet without the most marked disapprobation. Indeed, I should always particularly reprobate any artificial and unnatural modes of checking population, both on account of their immorality and their tendency to remove a necessary stimulus to industry." In fact, his object was not to diminish population, but to obviate the misery and vice which excess of population over means of subsistence must inevitably produce. In replying to his critics he says they "proceed upon the very strange supposition that the ultimate object of my book is to check population, as if anything could be more desirable than the most rapid increase of population unaccompanied by vice and misery. But of course my ultimate object is to diminish vice and misery, and any checks to population which may have been suggested (moral restraint rather than the existing positive checks) are solely as a means to accomplish this end." And so: as the average number of births to a marriage are five, let no man marry unless he is in a position to maintain a wife and five children. To this Malthusian precept who will object?

SANITARY AND METEOROLOGICAL

Compiled by J. W. Moore, B.A., M.D., Univ. Dubl.; F. R. Met. Soc.; Diplomate in State Medicine and ex-Sch. Tr

Vital Statistics

For four Weeks ending Saturday, February 27, 1

The deaths registered in each of the four weeks i principal Town Districts of Ireland, alphabetically arr sponded to the following annual rates per 1,000:—

Towns	Weeks ending				Towns	Weel	
	Feb. 6.	Feb. 13.	Feb. 20.	Feb. 27.		Feb. 6.	Feb. 13.
Armagh -	7·0	28·0	42·0	42·0	Limerick -	37·9	33·7
Belfast -	30·6	26·3	30·0	26·9	Lisburn -	8·6	12·8
Cork -	32·5	32·5	31·8	47·7	Londonderry	15·7	11·0
Drogheda	52·7	0·0	13·2	22·0	Lurgan -	31·9	27·4
Dublin -	32·7	31·5	36·4	38·4	Newry -	36·2	24·2
Dundalk -	29·3	4·2	29·3	20·9	Sligo -	56·7	30·9
Galway -	15·1	37·8	11·3	75·6	Waterford -	27·5	45·0
Kilkenny	80·2	18·9	18·9	42·5	Wexford -	49·7	36·1

In the week ending Saturday, February 6, 1892, th thirty-three large English towns, including London (in was 30·6), was equal to an average annual death-rate of persons living. The average rate for eight principal tow was 22·0 per 1,000. In Glasgow the rate was 24·7, and it was 21·2.

The average annual death-rate represented by the de during the week in the sixteen principal town districts of Ir per 1,000 of the population (unrevised) according to the re

The deaths from the principal zymotic diseases in the si were equal to an annual rate of 1·8 per 1,000, the rates 0·0 in eight of the districts to 8·1 in Newry—the 9 deaths registered in that district comprising 2 from diarrhœa 150 deaths from all causes registered in Belfast are 3 fr from scarlatina, 7 from whooping-cough, 1 from diphtheria, fever, 1 from diarrhœa, 21 from phthisis, and 49 from respiratory system. The 47 deaths in Cork comprise 1 from typhus and 3 from whooping-cough. Three deaths from influenza are specially reported by the Registrar of Waterford No. 1 District, 3 by the Assistant-Registrar of Dundalk District, 1 by the Registrar of Kilkenny No. 1 District, and 4 by the Registrar of Wexford District.

In the Dublin Registration District the registered births amounted to 189—90 boys and 99 girls; and the registered deaths to 225—114 males and 111 females.

The deaths, which are 3 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 33·6 in every 1,000 of the population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 32·7 per 1,000. During the first five weeks of the current year the death-rate averaged 41·6, and was 8·2 over the mean rate in the corresponding period of the ten years 1882–1891.

The number of deaths from zymotic diseases registered is 32, being 6 in excess of the average for the corresponding week of the last ten years, but 10 under the number for the week ended January 30. The 32 deaths comprise 23 from influenza and its complications (a decline of 7 as compared with the number for the preceding week), 2 from whooping-cough, 1 from enteric fever, 3 from diarrhœa, and 1 from erysipelas.

Eleven cases of enteric fever were admitted to hospital, being 3 over the admissions for the preceding week. Five enteric fever patients were discharged, 1 died, and 66 remained under treatment on Saturday, being 5 over the number in hospital at the close of the preceding week.

The hospital admissions for the week include also 11 cases of measles (against 3 for the preceding week) and 3 of scarlatina, but no cases of typhus were received. Sixteen cases of measles, 7 of scarlatina, and 3 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had fallen from 127 for the week ended January 23, to 81 for the following week, further declined to 63, but this number is 5 in excess of the average for the fifth week of the last ten years. The 63 deaths comprise 45 from bronchitis and 15 from pneumonia or inflammation of the lungs.

In the week ending Saturday, February 13, the mortality in thirty-three large English towns, including London (in which the rate was 21·6), was equal to an average annual death-rate of 23·1 per 1,000 persons living. The average rate for eight principal towns of Scotland was 20·8 per 1,000. In Glasgow the rate was 21·2, and in Edinburgh it was 15·1.

The average annual death-rate in the sixteen principal town districts of Ireland was 28·5 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the si were equal to an annual rate of 2·1 per 1,000, the rates 0·0 in ten of the districts to 4·5 in Wexford—the 8 deaths registered in that district comprising 1 from diphtheria. 129 deaths from all causes registered in Belfast are 2 f from scarlatina, 7 from whooping-cough, 5 from enteric diarrhœa, 21 from phthisis, and 44 from diseases of system. The 47 deaths in Cork comprise 5 from whoopin from simple continued fever. The 24 deaths in Limeri from whooping-cough and 1 from diarrhœa. Six deaths are specially reported by the Registrar of Waterford No. the Registrar of Wexford District, and 1 by the Registra No. 1 District.

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Deaths from zymotic diseases, which had fallen from ended January 30, to 32 for the following week, further de 4 under the average for the corresponding week of the The 19 deaths comprise 1 from measles, 12 from influ under the number of deaths from that disease for the p 3 from whooping-cough, 1 from enteric fever, and 1 from

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the condyles. He laid particular stress on the importance of removing a portion of the *shaft* of the humerus in addition to the condyle, otherwise a stiff joint would be sure to follow.

He exhibited a number of specimens of his cases from the Museum of the College, showing the amount of bone removed. He also exhibited a radius and ulna from the Bone-room of the College, showing the insertions of the biceps and brachialis anticus, the latter insertion being sufficiently low to allow of the removal of the coronoid process. He laid stress on the importance of early passive movements. If sufficient bone is removed there is no fear of ankylosis. In his experience arms, after excision, are not really useful before the expiration of six months to a year.

Mr. Wheeler said that he had also cases in which there were scarcely any symptoms to warrant operation as far as external appearances. Some of these cases he described under the head of silent caries. As the President stated that his observations were addressed to the junior men present, and as most of the observations made were well known—in fact, might be called standard rules—he would only allude to one or two points. First, the use of Esmarch bandage in excisions of joints. Some ten years ago he read his condemnation of this bandage; in excisions of joints such as the shoulder, elbow, knee, it was not useful, and he advocated its use in excision of bones such as the bones of the foot, but his experience many years ago taught him that secondary hæmorrhage was prone to follow its application when used in joint excisions. He did not agree that the transverse incision, made in what is termed the H incision, opened when passive motion was set up, for it was below the line where flexion took place; he invariably adopted a single incision. In bony ankylosis he had practised, on one occasion, the operation suggested by Mr. Butcher, but never performed by him. Like Adams' operation, which was a modification of Mr. Butcher's, bony ankylosis always followed, for the sawn bones remained too close—the only difference being that a straight ankylosed elbow-joint could be converted into a flexed, stiff joint, which, in his opinion, was nearly as useless. The last three cases of excision of this joint he had performed, were for ankylosis in the semi-flexed position.

Mr. Barton said that in his experience excision had rarely to be performed for ankylosis in the flexed position. He endorsed what the President had stated as to the time required for a useful cure, and believed twelve months necessary.

Mr. Myles was surprised to hear the last speaker say that ankylosis was not necessary for flexed positions of the forearm. In his opinion the traditional belief that a flexed position of the forearm, that is, nearly a right angle, was wrong. He had fastened his own arm at a right angle in plaster of Paris, and found it was quite useless to him.

The **President** replied.

The number of deaths from diseases of the respiratory s
is 61, being 3 over the average for the corresponding
ten years, but 2 under the number for the week ende
The 61 deaths comprise 36 from bronchitis, 10 from
inflammation of the lungs, 4 from croup, and 1 from ple

In the week ending Saturday, February 27, the mor
three large English towns, including London (in whi
22·4), was equal to an average annual death-rate of 23·4 p
living. The average rate for eight principal towns of Sc
per 1,000. In Glasgow the rate was 24·9, and in Ed
18·7.

The average annual death-rate in the sixteen princip
of Ireland was 33·3 per 1,000 of the population (unrevis
the recent Census.

The deaths from the principal zymotic diseases register
districts were equal to an annual rate of 2·5 per 1,000, t
from 0·0 in ten of the districts to 5·2 in Sligo—the 6
causes registered in that district comprising 1 from dia
the 132 deaths from all causes registered in Belfast are
1 from typhus, 5 from whooping-cough, 1 from diphtheri
continued fever, 2 from enteric fever, 3 from diarrhœa, 2
and 90 from diseases of the respiratory system. The 69
comprise 1 from typhus, 5 from whooping-cough, 1 fro
from phthisis, and 18 from diseases of the respirator
Registrar of Waterford No. 1 District specially reports
influenza.

In the Dublin Registration District the registered bir
197—103 boys and 94 girls; and the registered deaths to
and 145 females.

The deaths, which are 53 over the average number for
ing week of the last ten years, represent an annual rate
39·5 in every 1,000 of the population. Omitting the death
of persons admitted into public institutions from locali
district, the rate was 38·5 per 1,000. During the first
the current year the death-rate averaged 39·6, and wa
mean rate in the corresponding period of the ten years 18

Thirty-four deaths from zymotic diseases were register
the number for the preceding week and 11 in excess of
the eighth week of the last ten years. The 34 deaths c
measles, 2 from scarlet fever (scarlatina), 1 from typhus, 6
(being a decline of 11 as compared with the number for
week), 8 from whooping-cough, 2 from simple continued
fever, 4 from enteric fever, and 2 from diarrhœa. Five

from whooping-cough occurred in No. 2 North City—Lisburn-street—District.

Sixteen cases of enteric fever were admitted to hospital, being 11 in excess of the admissions for the preceding week and 5 over the number for the week ended February 13. Twelve enteric fever patients were discharged, 1 died, and 65 remained under treatment on Saturday, being 3 over the number in hospital at the close of the preceding week.

The hospital admissions for the week include, also, 10 cases of measles and 1 case of scarlatina, but no cases of typhus were received. Twenty-two cases of measles, 5 of scarlatina, and 1 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system amount to 65, being 4 over the number for the preceding week and 9 in excess of the average for the eighth week of the last ten years. They comprise 52 from bronchitis and 11 from pneumonia or inflammation of the lungs.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ *N., Long.* 6° 15′ *W., for the Month of February,* 1892.

Mean Height of Barometer, - - -	29·787 inches.
Maximal Height of Barometer (on 13th, at 9 a.m.),	30·666 „
Minimal Height of Barometer (on 20th, at midnight)	29·136 „
Mean Dry-bulb Temperature, - - -	40·8°.
Mean Wet-bulb Temperature, - - -	39·1°.
Mean Dew-point Temperature, - - -	36·5°.
Mean Elastic Force (Tension) of Aqueous Vapour, -	·221 inch.
Mean Humidity, - - - - - -	85·0 per cent.
Highest Temperature in Shade (on 7th) - -	54·6°.
Lowest Temperature in Shade (on 17th), - -	26·1°.
Lowest Temperature on Grass (Radiation) (on 17th),	21·1°.
Mean Amount of Cloud, - - - -	68·5 per cent.
Rainfall (on 19 days), - - - -	2·119 inches.
Greatest Daily Rainfall (on 20th), - - -	·531 inch.
General Directions of Wind, - - -	W., E.

Remarks.

No greater contrast could there be than between the weather of February, 1892, and that of February, 1891, which proved a record month for drought, mildness, calm, and fogginess combined.

The month now under review was, on the contrary, wet, cold, stormy, and cloudy. Rain or snow fell in measurable quantity on 19 out of 29 days, and on as many as 10 days the wind reached the force of a gale in Dublin. Had it not been for a mild period from the 6th to the 12th, February, 1892, would have proved one of the coldest on record.

In Dublin the mean temperature (41·3°) was 1·5° b
(42·8°); the mean dry bulb readings at 9 a.m. and 9
In the twenty-seven years ending with 1891, Februar
1873 (M. T. = 37·9°), and warmest in 1869 (M. T. =
the M. T. was 39·7°. In the year 1879 (the "cold yea
In 1888 it was as low as 38·6°; in 1889 it was 40·3°
41·5°; and in 1891 it was as high as 44·7°.

The mean height of the barometer was 29·787 inch
below the average value for February—namely, 29·855
inch below the mean pressure in February, 1891. The
30·666 inches at 9 a.m. of the 13th, and fell to 29·13
night of the 20th. The observed range of atmospheri
therefore, 1·530 inches—that is, a little over an inch an

The mean temperature deduced from daily readings
thermometer at 9 a.m. and 9 p.m. was 40·8°, or 2·3° ab
January, 1892. Using the formula, *Mean Temp.* =
min. × ·50), the M. T. becomes 41·3°, compared with a t
average of 42·8°. On the 7th the thermometer in th
54·6°—wind, W.; on the 17th the temperature fell
W.S.W. The minimum on the grass was 21·1° on the

The rainfall was 2·119 inches, distributed over 19 day
rainfall for February in the twenty-five years, 1865–8
2·150 inches, and the average number of rainy days
rainfall, therefore, was slightly below the average, whi
were above it. In 1883 the rainfall in February w
inches on 17 days; in 1879, also, 3·706 inches fell on 2
other hand, in 1873, only ·925 of an inch was measured
in 1890, only ·802 of an inch fell on but 7 days; and in
of an inch fell on 11 days. The rainfall in 1887 was m
recorded in February for very many years. But the re
probably unparalleled—·042 inch on 2 days. The near
this drought was in September, 1865, when only ·056 of
was measured on but 3 days.

There was no snow, sleet, or hail in Dublin in Febr
in the present month snow or sleet fell on 8 days—the
16th, 17th, 18th, 19th, and 20th; while hail was obser
the 15th, 16th, 18th, 21st, and 29th.

The atmosphere was foggy on 6 days—namely, the 4th
26th, and 27th. The amount of cloud—68·5 per cent.-
of the average—66 per cent. High winds were noted on
ing the force of a gale on no less than 10 occasions—
2nd, 7th, 8th, 15th, 16th, 19th, 20th, 21st, and 23rd.

The temperature exceeded 50° in the screen on 6 days,
6 days in January, and as many as 14 days in February,

fell to or below 32° in the screen on 5 days, compared with 15 days in January, and with 2 in February, 1891. The minima on the grass were 32°, or less, on 16 nights, compared with 25 nights in January, and 17 nights in February, 1891. On 6 days the thermometer failed to rise above 40° in the screen.

Very changeable weather prevailed throughout the period ended Saturday, the 6th. Large depressions passed eastwards or northeastwards across Scotland, the Norwegian Sea, and Scandinavia, causing frequent showers, storms, and sudden changes of temperature. The most serious and deepest of these depressions was observed on the evening of Monday, the 1st, when the barometer sank to 28·02 inches by 6 p.m. at Sumburgh Head in the Shetlands. In Dublin Monday broke during the prevalence of a gale from S.W. to W. On this day the weather turned much colder and falls of snow occurred during the ensuing night. Tuesday and Wednesday were cold, but chiefly fine and dry. Thursday was dull, with rain at times—in the evening the sky cleared. Friday was a fine day. Saturday proved dull, damp, foggy, mild, and rainy. A near conjunction of the Moon, Jupiter, and Venus in the southwestern sky was well observed on Monday evening, and on Friday the planets Jupiter and Venus were seen quite close together after dusk. In Dublin the barometer fell to 29·150 inches at 3 p.m. of Tuesday (wind, W.). On Monday the thermometer rose to 50·8° in the shade; on Tuesday it fell to 33·0°. The rainfall was ·242 inch on four days—·121 inch being measured on Monday. The prevailing winds were W. and S.W.

Very dull mild weather prevailed after Monday, the 8th, to the close of the week ended Saturday, the 13th. On Sunday a depression crossed Scotland in an easterly direction, causing fresh or strong westerly winds, and rain at many stations. A secondary disturbance followed at night, being heralded by lunar halos and accompanied by a gale and heavy rain early on Monday morning. The weather then cleared and remained fair and cool until 6 a.m. of Tuesday, when foggy, damp, cloudy weather set in. An anticyclone was at this time found over the S. of Ireland, the S.W. of England, and Brittany, as well as over the Atlantic to the southwestward of the British Islands. This high pressure system daily increased in intensity, until on Saturday morning the barometer stood as high as 30·67 inches in Dublin, 30·70 inches at Valentia Island, and 30·73 inches at Belmullet. On Thursday night the sky cleared over the S.E. of England, where temperature consequently fell fast, so that frost occurred on Friday morning. A similar clearing of the sky took place in Dublin at midnight of Friday, resulting in a rapid decrease of temperature for the time being. By 8 a.m. of Saturday, however, the sky had again become overcast. In Dublin the mean atmospherical pressure was 30·341 inches, or more than three-quarters of an inch above the value for the previous week (29·566 inches). The barometer fell to

29·730 inches at 4 p.m. of Sunday (wind, W.), and rose
at 9 a.m. of Saturday (wind, N.N.W.). The mean tempe
the mean dry bulb temperature at 9 a.m. and 9 p.m. be
thermometers in the screen rose to 54·6° on Sunday an
Saturday. The rainfall was ·333 inch on three days,
referred to Sunday. The prevailing winds were W.
percentage of cloud during the week was 75.

It is not often that, even in the variable climate of th
so complete a *volte-face* occurs in the weather of two c
as that which we have now to chronicle. The week
was dull, mild, and genial, with moderate westerly wind
under review was inclement, cold, and stormy, with
snow and hail, and a prevalence of piercing, dry easte
change began early on Sunday morning with a rapid
pressure and temperature as an extensive depression ad
northward, passing in a southerly direction across Gr
heavy shower of cold rain fell in Dublin at 3 30 p.m.
14th, after which the sky cleared with ever-increasing co
and hail fell on Monday, when the wind shifted to E., a
a gale. A new disturbance on Wednesday caused a te
wind to W., and a fall of snow, followed by a thaw. Ne
returned to the eastward and snow and hail fell in
Friday and Saturday a severe easterly gale prevailed wi
storms. At first the air was unusually dry, the re
falling to 55 per cent. at 9 a.m. of Friday. Afterwards
damp and raw, with a gradual thaw on Saturday. The
England was at times very intense—at Loughborough, i
the thermometer in the screen fell to 0° (zero) on Wedn
on Friday, when the minimum at York also was 7°. C
unusually low reading −2° was recorded at Braemar i
Newton Reigny in Cumberland. In Dublin the mea
29·526 inches, the barometer ranging between 30·193 i
of Sunday (wind, W.) and 29·136 inches at midnight of
E.). The corrected mean temperature was 35·1°. The
temperature at 9 a.m. and 9 p.m. was 34·6°. The screene
rose to 48·6° on Sunday and fell to 26·1° on Wednesday
consisted chiefly of snow and hail. It amounted to ·937
The heaviest fall was ·531 inch on Saturday. The p
were W.N.W. and E.N.E.

During the week ended Saturday, the 27th, the weath
most part dull, rainy, and cold, with persistent south-eas
cloudy skies. A large anticyclone was found througho
and northern Europe, while a deep depression passed slow
from the S.W. of Ireland, to which locality it had adv

southward on Saturday, the 20th. At 8 a.m. of Sunday, the 21st, the barometer was as low as 28·89 inches at Valentia Island in Kerry, or exactly one inch lower than the reading in the Shetlands at the same time. During the previous night a whole gale to a storm from the eastward had been experienced in Ireland, where snow, sleet, and rain fell in large quantities. While the depression in the S.W. was gradually "filling up" and moving away over the Atlantic, the weather remained dull and wet, with strong and squally S.E. winds. On Friday atmospherical pressure became uniform over Ireland, where the sky cleared temporarily and the thermometer fell fast. Saturday proved gloomy and cold with a freshening easterly to north-easterly wind. In Dublin the mean height of the barometer was 29·671 inches, pressure increasing from 29·188 inches at 9 a.m. of Sunday (wind, S.E.) to 30·119 inches at 9 a.m. of Saturday (wind, E. by N.). The mean temperature was 42·2°. The mean dry bulb readings at 9 a.m. and 9 p.m. were 42·4°. The screened thermometers rose to 47·7° on Friday and fell to 33·8° early on Saturday. The rainfall amounted to ·605 inch on five days. Of this quantity ·153 inch was measured on Tuesday. Thunder and lightning were rather prevalent in the south. The wind was constantly S.S.E. or S.E. until Saturday, when it backed to E.N.E.

The last two days of the month were cold, changeable, and for the most part dull. A shower of hail fell on the afternoon of the 29th.

In Dublin the rainfall up to February 29, 1892, has amounted to 3·817 inches on 39 days, compared with ·714 inch on 16 days in the same period in 1891, and a twenty-five years' (1865–1889) average of 4·350 inches on 34·5 days.

At Knockdolian, Greystones, Co. Wicklow, 2·165 inches of rain fell in February, on 16 days; and only 1·045 inches in January, on 15 days. The otal fall to February 29th inclusive has been 3·210 inches, on 31 days.

LEAD-POISONING IN NEW SOUTH WALES.

a recent issue of the *Australasian Medical Gazette* there is an amusing ase of "lead"-poisoning, gravely reported and justly called a "remarkble case." The reporter's daughter "accidentally fell when running, nd broke the point of a black lead pencil in the back part of her hand." "bit of lead (about 2 grains)" remained imbedded for six or seven eeks, and produced optic neuritis until removed. The doctor had "often tended patients suffering from lead-colic, but the symptoms in the esent case were somewhat of a different character." The most remarkle thing about the case is that the editor prints it in full, with its title, Remarkable Case of Lead-Poisoning," contenting himself with a mild te "reminding" the writer that plumbago contains no lead!

PERISCOPE.

CLINICAL AND THERAPEUTIC NOTES ON INFLU

DR. C. R. ILLINGWORTH, of Clayton-le-Moors, writes
March 5, 1892:—"The incubation period of the disease
days. I recognise two types—the pulmonary, with ma
chief, and the peripheral, with great bodily pain but slight
The curative agents are germicidal and febrifuge or an
particular agents employed depend upon the predominan
but I maintain that the indications are the same in all. T
to diminish the excess of fibrin in the blood; and, second
excited action of the heart and blood-vessels: thus at on
tension and pain caused by the blood-stasis of inflammatio
the temperature by diminishing heart-work. Complete
been forthcoming from the profession as to the value in t
influenza of drugs possessing these valuable properties.
antifibrinating agents there are, in order of potency, an
congeners, the salicylates, iodides, acetates, carbonates,
ammonia, soda, and potash, &c., all of which have been s
scribed, either singly or in combination with the cardi
aconite, digitalis, and ipecacuan. At the same time, sim
ing food has been ordered at regular intervals, and—
popular notion—the avoidance at first of alcohol, for
Amongst germicidal agents, eucalyptus, carbolic acid, me
&c., have been used successfully, some as inhaled vapou
internal medicaments. In the pulmonary, which is th
fatal type, treatment with nitrous ether, ipecacuan, iro
doses of opium (as a sedative), and the constant use of s
vapour, has answered excellently. Antipyrin and all
drugs are dangerous in this form. In the peripheral fo
tion of acetate of ammonia, 2-grain doses of antifebri
minim doses of aconite, and half-drachm doses of solut
biniodide, given every two hours, acts very rapidly
disease in from 10 to 18 hours. For the slight remai
phuric acid, opium, and carbolic acid suffice. But, alth
matory disorders are characterised by excessive fibrinati
there are two causes in influenza which inevitably lea
state of the vital fluid; and it is in reference to this de
special precautions should be taken in treatment. The f
operates in all specific febrile disorders—the depredat

respiratory system. The 47 deaths in Cork comprise 1 from typhus and 3 from whooping-cough. Three deaths from influenza are specially reported by the Registrar of Waterford No. 1 District, 3 by the Assistant-Registrar of Dundalk District, 1 by the Registrar of Kilkenny No. 1 District, and 4 by the Registrar of Wexford District.

In the Dublin Registration District the registered births amounted to 189—90 boys and 99 girls; and the registered deaths to 225—114 males and 111 females.

The deaths, which are 3 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 33·6 in every 1,000 of the population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 32·7 per 1,000. During the first five weeks of the current year the death-rate averaged 41·6, and was 8·2 over the mean rate in the corresponding period of the ten years 1882–1891.

The number of deaths from zymotic diseases registered is 32, being 6 in excess of the average for the corresponding week of the last ten years, but 10 under the number for the week ended January 30. The 32 deaths comprise 23 from influenza and its complications (a decline of 7 as compared with the number for the preceding week), 2 from whooping-cough, 1 from enteric fever, 3 from diarrhœa, and 1 from erysipelas.

Eleven cases of enteric fever were admitted to hospital, being 3 over the admissions for the preceding week. Five enteric fever patients were discharged, 1 died, and 66 remained under treatment on Saturday, being 5 over the number in hospital at the close of the preceding week.

The hospital admissions for the week include also 11 cases of measles (against 3 for the preceding week) and 3 of scarlatina, but no cases of typhus were received. Sixteen cases of measles, 7 of scarlatina, and 3 of typhus remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had fallen from 127 for the week ended January 23, to 81 for the following week, further declined to 63, but this number is 5 in excess of the average for the fifth week of the last ten years. The 63 deaths comprise 45 from bronchitis and 15 from pneumonia or inflammation of the lungs.

In the week ending Saturday, February 13, the mortality in thirty-three large English towns, including London (in which the rate was 21·6), was equal to an average annual death-rate of 23·1 per 1,000 persons living. The average rate for eight principal towns of Scotland was 20·8 per 1,000. In Glasgow the rate was 21·2, and in Edinburgh it was 15·1.

The average annual death-rate in the sixteen principal town districts of Ireland was 28·5 per 1,000 of the population (unrevised) according to the recent Census.

with the following division of the scientific work of t
I. Anatomy; II. Physiology; III. Clinical Medicine; I
V. General Pathology and Pathological Anatomy;
VII. Surgery and Orthopædics; VIII. Psychiatry and I
IX. Ophthalmology; X. Dermosyphilopathy; XI. L
XII. Hygiene; XIII. Laryngology and Otology; XIV.
cine and Surgery. The Central Committee has recently
Committees for the purpose of inviting every nation in t
part in the Congress, so that it may prove worthy of
and also of Rome. The time, so far, chosen for the co
Congress is the month of September, a period when very f
weather adds to the many fascinating attractions of the
All the preparations proceed with promptness and give
great and unqualified success. Letters on the business
should be addressed to the Secretary-General, Professor
Instituto di Clinica Medica, Ospedale Pammatone, Genoa

THE LOCAL GOVERNMENT (IRELAND) BILL, 1

In considering the provisions of this Bill which immedi
medical profession, and leaving out other questions, we f
10 provides for the transfer to the county councils of th
present boards of poor-law guardians, acting as the loc
regard to the Contagious Diseases (Animals) Acts, 187
the Destructive Insects Act, 1877. Again, Clause 12 ena
councils to take over the powers of boards of guardians
sanitary authorities under the following very important
Public Health (Ireland) Act, 1878; the Housing of the V
Act, 1890; the Labourers (Ireland) Acts, 1883 to 188
and Workshop Act, 1891; and the Acts amending any
sures, as well as any other Act conferring powers and
sanitary authorities as such. For the carrying out of
transferred, any county council may divide their cou
"sanitary districts" as (with the approval of the Loc
Board) they may think suitable; and they may delega
administration of such a district to a "sanitary committe
county councillors and councillors of the baronies compris
part in the district. The county council may appoint of
sanitary Acts either for the whole county or for any pa
This provision, of course, includes the appointment of me
health, and we may here express the hope that advantag
of it to put a stop to the present system of appointi
sanitary officer at a wretchedly inadequate salary for
union, which is the existing unit of a rural sanitary dis
under the Public Health Act of 1878 (see Section 6 of tha

is no reason why, under Clause 12, a medical officer of health at a good salary should not be appointed for an entire county. We would go further, and suggest that the clause should be amended so as to allow several county councils to unite in appointing a first-class specialist as medical officer of health at a salary which would render him independent in the fullest sense of the term. Unfortunately, this Clause 12 is permissive, not compulsory—at least it is not until the councils of not less than three-fourths in number of all the counties in Ireland have adopted the clause that the Lord Lieutenant may, by an Order in Council, direct that it shall have effect in the remaining counties. We are at a loss to understand in what relation the dispensary medical officers—who, under Section 11 of the Public Health (Ireland) Act, 1878, are medical officers of health for their several districts—will stand to the Bill now before us. They are appointed by their respective dispensary committees, subject to the approval of the several boards of poor-law guardians, and will, therefore, owe no allegiance to the county councils or the sanitary committees appointed by the latter. In our opinion, it would be well to supersede the existing by a brand-new sanitary organisation. So far as its medical aspect is concerned, the present sanitary organisation in Ireland has signally failed, mainly from two causes—first, want of independent supervision; and, secondly, inadequate remuneration. The Act of 1878 by Section 11 gives only a permissive power to the Local Government Board to provide independent supervision, and naturally this power in consequence has not been exercised. Again, the remuneration allowed to medical officers of health by the various sanitary authorities under the sanction of the Local Government Board is—except in a very few instances—so shamefully inadequate that the only possible result is practically to render the Act a dead letter so far as medical inspection or advice is concerned. Let us look a little more closely into these two points—supervision and remuneration. Anyone who will consider the relations existing between the district medical officers of health and the district sanitary authorities will scarcely deny the expediency—nay, the necessity, of providing independent supervision. Representations on this subject were repeatedly made to the Government at the time of the passing of the Public Health Act in 1878, but the stereotyped official answer invariably was that independent supervision was a matter for administration, and not one requiring legislation. Be this as it may, at present no such thing as independent supervision exists in Ireland, except perhaps in Dublin and Belfast. On the contrary, the sanitary authorities have been satisfied with appointing a nondescript class of officials called "consulting sanitary officers." These gentlemen are generally the workhouse medical officers, directly dependent on the boards of guardians who appoint and pay them. "Pay them!" Hear the Report of the Royal Commission on Local Government and Taxation of Towns in Ireland (1877) on this point:—"In name there is generally a consulting at a ludicrously small salary, but he is rarely consulted Belfast, it is a perfect misnomer." Another burning que the remuneration to be awarded to the medical sanita country. Immediately on the passing of the Public Healt the Local Government Board for Ireland sent a genera sanitary authorities throughout the country to the effect t paid to the "sanitary officers" (medical officers of heal exceed one-fourth of the amount of their salaries as disp officers. By this extraordinary order it is needless to sa spects of effective sanitation in Ireland were virtually ruin being. It is true that, owing to strong remonstrance Government, the objectionable provision by which a ma remuneration was fixed for the services of the medical of was withdrawn when the Act of 1878 became law. B true that no serious attempt has been made in accord spirit of that Act to terminate the grievance in regard which the district medical officers of health had previousl seems to us that the present is a favourable opportunity whole sanitary organisation of Ireland, and that clauses f should be introduced into the Local Government Bill now Certain it is that, if the Bill passes in its present form, co rendered worse confounded as regards sanitary matters. an invidious distinction is drawn between the county su medical officer of health—the former officer cannot be dis county council, who may "remove at their pleasure" the of health and other officers. Sections 214 and 215 of the (Ireland) Act, 1878, which relate to the making of provis the Local Government Board, are to apply for the purpos Government Bill, as if re-enacted in it, and in terms m thereto. Similarly, Sections 209, 210, 212, and 213 of relating to the holding of local inquiries by the Local Gove are to be re-enacted and incorporated in the Bill. A clauses which bear upon the sanitary administration of the which confer new powers upon the county council possess for the medical profession. We allude particularly to Cl confers upon the county council the right to appoint at le the governors or directors of the district lunatic asylu which vests in the county council the right of appointin governors of any county infirmary or hospital to which is made out of county cess—such governors to be memb corporate of the infirmary or hospital in question; and Cl transfers from the Parliamentary electors to the county co of appointing a coroner for the county or any district in going analysis of some of the important provisions of this Bill will show how closely its passage through Parliament will require to be watched if the interests of the medical profession are to be efficiently safeguarded.—*British Medical Journal.*

CLINIQUE FRANCAISE.

We have received the programme of the Clinique Française, the Paris School of Medico-Chirurgical Practice. The object of the institution is "to group in one spot, open all the year round, the various general and special hospital clinics, so as to facilitate for students and for practitioners the rapid study (primary, or by way of repetition) of the actual practice of the healing art." Hitherto it has been almost impossible for either French students or foreign visitors to obtain opportunities of manipulating the instruments and apparatus indispensable for the diagnosis and treatment of diseases of the eye, the nose, the ear, the mouth, the larynx, the urinary passages, &c. In order to study nervous diseases, skin diseases, syphilis, diseases of children, orthopædics, general surgery, anæsthesia, gynæcology, biological chemistry, bacteriology, it was necessary to visit twenty hospitals or dispensaries, one after the other, while certain branches of medical science were not taught anywhere—such as massage, hydrotherapy, electrotherapy, vaccination, hypodermic injection. To obviate these difficuties the school was established. Each of the subjects enumerated above is taught in a special, theoretical, and practical two-months course of lectures, and, independently of these, the authors of new discoveries in any of these subjects deliver special addresses. The programme before us gives the syllabus of each course. The classes appear to be absolutely free to all.

DEATH-RATE IN RUSSIA.

The *Cincinnati Medical News* states that mortality is much higher in Russia than in other countries. Of 1,400,000 male children born in 1855, within twenty-one years (in 1876—time of the conscription) 610,000, or 43 per 100 only, were found living. Among 1,512,202 boys born in 1862, in 1882 (time of the conscription) 777,769, or 51 per 100, were found living. Among 382,109 called in 1884, 71,607 men, or 19 per 100, were found, after medical examination, incapable for military service. The military incapacity is in most cases determined (in 32·9 per 100 cases) by affection of the bones, articulations, and muscles.

SPIRIT-DRINKING ON THE CONTINENT.

The *Journal of the American Medical Association* gives some figures inconsistent with popular beliefs as to the consumption of spirits in some of the continental States. In the German Empire, for instance, commonly supposed to be addicted to beer-drinking, less than half a pint a day is consumed for each individual of the population, while in the absorption of spirits it ranks third of European States. Denmark consumes 20 litres a head per annum, Russia 12, Germany 11. In France the consumption of spirits is steadily and rapidly increasing. In the department of Lower Seine it amounted in 1890 to 3 gallons per head.

MEDICINE IN PUEBLA.

WE are glad to see that Puebla, a city of 90,000 inhabitants, is able to start, and, we trust, to maintain, a medical periodical of its own; and we welcome our infant contemporary, the *Boletin Medico de Puebla.* It is a monthly journal; annual subscription, one dollar, each number containing twelve large pages. There is a powerful staff of editors, amongst them two Drs. O'farrill—a name which looks familiar. We notice that in the first quarter of 1891, 662 deaths were registered—a mortality of 2·68 per mille per mensem, but, as only one death is attributed to parturition, it is to be feared that registration is not absolutely perfect. By far the largest number of deaths in that quarter are attributed to pneumonia, 58 to eclampsia, and 48 to various forms of enteritis, 29 to smallpox, 15 to typhus.

PRESERVATIVE FOR STEEL PENS.

HOW to keep your favourite pen from rusting is one of the most desirable of secrets; and if our contemporary, the *Répertoire de Pharmacie,* is correct, it is a very simple matter. After, like ourselves, trying a number of remedies, the end desired was found by sticking the point of the pen into a raw potato. [We are inclined to think that the idea was borrowed from Ireland, for we remember seeing the familiar "Murphy" acting as a penwiper for some of our readers.—ED.]

L'UNIVERS MÉDICALE

Is a comparatively recent addition to the ever-increasing list of medical periodicals. It is issued monthly in Paris, edited by Dr. E. Sereno, and devoted to "diseases of women and medical electricity." It gives 20 octavo pages for fourpence sterling. The number before us contains the continuation of an elaborate paper by the editor on the differential diagnosis of uterine tumours. The purely electrical information is rather elementary; but we have an alphabetical list—from *accouchement* to *vomissements*—of 108 morbid conditions for which electricity is the cure. Within the limits self-imposed the contents are varied.

THE CHICAGO MEDICAL RECORDER.

THIS monthly is the Journal of the Chicago Medical Society. The number now before us (Nov. 1891) contains 106 octavo pages, well printed on excellent paper, price one shilling. Eighty pages are taken up with the proceedings of the Medical and other societies, 3 pages with reviews, and 70 with original contributions of which there are ten, including a Presidential Address. It is significant that five of the ten papers are devoted more or less directly to typhoid fever, which appears to be endemic in Chicago. We observe in the Health Office Report for October, that in a population of 1,200,000, 171 deaths were due to this disease—nearly 9 per cent. The total mortality for the month was 1,010—"15·85 per thousand of population October, 1890," but "19·10 per thousand of population." The other principal causes of death were phthisis, 160; violence, 162; diphtheria, 124; pneumonia, 112; scarlatina, 43; suicide, 33. 780 children under five died.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

Ready-made Poultices.

MESSRS. SACKLINS and Co., of 20 Royal Exchange, London, have patented ingeniously-designed linseed and mustard poultices, which cannot fail to supply the want long felt for a serviceable and cleanly poultice.

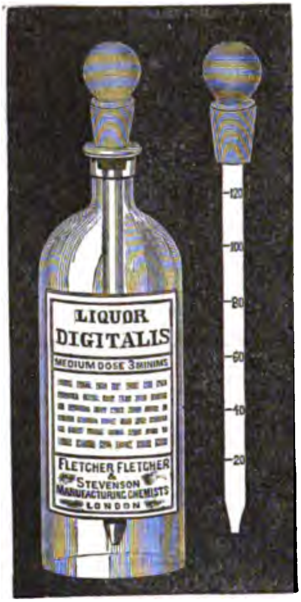
Both the linseed and the mustard poultices have waterproof backs and muslin faces. They are prepared of two sizes—the smaller, 7½ inches square, has four sections; the larger, 23 inches by 7½, has twelve similar sections. These poultices may be used whole, or they may be divided into portions of the required size by cutting between the close parallel seams which separate the sections from each other.

The linseed poultice is a real poultice of pure crushed linseed said to be rendered aseptic. These poultices are ready for immediate use and merely require soaking with boiling water poured from a kettle. When applied to unbroken skin (as in chest affections) they may be re-dipped in boiling water and used fifteen or twenty times consecutively, they will thus be found 60 to 80 per cent. less costly than poultices as ordinarily made. They are prepared with about one-tenth of the trouble, and are much more cleanly and effective.

The mustard poultice is made of pure brown mustard flour, and ground mustard husk which contains a bland soothing oil. These poultices require moistening with warm water and can be worn for hours by adults. Delicate invalids and children can wear them long enough to derive full benefit from using them, and it is obvious that the benefit derived from a prolonged application of these comfortable mustard poultices is much greater than is the case with home-made blisters or mustard leaves that are most frequently rejected by the patient before any appreciable advantage has been gained by using them.

The poultices cost sixpence, or one shilling and sixpence each, according to size.

Autometric Stopper.



In the number of this Journal for June, 1888 (Vol. LXXXV., No. 198, third Series, page 560), we noticed with approval a process for the extemporaneous production of decoctions, infusions, tinctures, and syrups then recently introduced by the well-known manufacturing chemists, Messrs. Fletcher, Fletcher, & Stevenson, of the North London Chemical Works, Holloway. The object of the new autometric stopper, an ingenious invention by the same firm, is to enable their "concentrated liquors," prepared by the above-mentioned process, to be conveniently and rapidly dispensed without the necessity of using a separate glass measure.

As a reference to the accompanying illustration will show, the arrangement consists of a stopper formed of pure unvulcanised rubber, through which passes a strong glass pipette, accurately graduated in 5-minim divisions, up to 120 minims. Attached to the tube is a rubber air-ball. On removing the stopper and attachment, and slightly compressing the ball, the required volume of liquor can be immediately withdrawn and transferred to the bottle which is to contain the medicine.

Full particulars of the strength and dose of each of the "concentrated liquors" are contained in a little pocket-list, which may be obtained on application to the firm at their business address, 21 Mincing Lane, London, E.C.

Malt Pastilles.

Messrs. Rowntree and Co., of the Cocoa Works, York, have, after more than two years' patient study, produced a delicious sweetmeat for which they claim the following advantages:—

1. The "Malt Pastilles" contain an unusually large amount of malt extract.
2. They are absolutely free from alcohol.
3. As a sweetmeat they are very pleasant and nutritious.
4. A large amount of the diastatic activity—which makes the extract so valuable as an aid to digestion—of the malt extract has been preserved.

The pastilles are very palatable, and are particularly acceptable to children. We have little doubt that they will quickly win their way into popular favour.

A DISCLAIMER BY DR. A. G. AULD.

Dr. Auld writes to us as follows, with an intimation that he intends his letter for publication:—

"3 Lugar-place,
"Kelvinside, Glasgow,
"*March* 15*th*, 1892.

"To the Editor of the Dublin Journal of Medical Science.

"Sir,

"A notice of my book on Bronchial Affections and Pneumonia in your current issue has come before me. Your Reviewer has made statements contrary to fact. I nowhere in my book hold that pus cells are formed from epithelium, or that proliferated muscle cells may undergo further alterations. I never said that the views of Rindfleisch and Buhl were a travesty of the whole subject of inflammation, but that to apply their views to the *resolution stage of pneumonia* would be a travesty of inflammation.

"If your Reviewer would stick to the text, instead of making random statements, his judgment on my attitude towards other pathologists would be likely to carry more weight.

"I am, sir,
"Your obedient servant,
"A. G. Auld."

Although we reserve to ourselves the right of criticising any work which may be sent to this Journal for review without fear or favour, we willingly insert Dr. Auld's letter as he requests.

In doing so, however, we feel that, in justice to ourselves, we should riefly state the grounds upon which we based the remarks upon his ook, of which Dr. Auld complains:—

The author describes a multiplication of nuclei in the epithelial cells f the bronchi. He says (page 26) it might be supposed that the nuclei ere pus corpuscles which had penetrated into the cell; but he does not dmit this explanation, and holds that this contention is useless, as no mph corpuscles have as yet passed through the basement membrane, and ssion of the protoplasm of the epithelial cells is taking place. It is ertainly implied that this fission gives rise to objects which may be misaken for pus corpuscles. As a result of the fission are produced pherical cells, which exhibit amœboid movements and behave generally s white blood. Further (p. 26), "the rounded cells of Debove's yer" (generally looked on as a deeper layer of epithelial: *cf.* Hamilton, Bronchitis," p. 5) "proliferate and give rise to round cells resembling us cells."

On again carefully reading the passages referred to, we cannot help thinking that the statement made in the review is justified by the text.

P. 50, "I have obtained unequivocal evidence of the participation to a very extensive degree of the muscular coat of the affected blood-vessels in the obliterative thickening. The staff-shaped nuclei were actively proliferating and extending in strings from the muscularis across the intima and mingling with the nuclear new formation derived from the latter." As stated in the review, the author does not say definitely what becomes of these strings of nuclei. But as no one, so far as we know, has ever seen a blood-vessel obliterated by muscular tissue, but always by connective tissue, it is not unnatural to assume that the muscular nuclei mingled with the connective tissue nuclei were supposed to undergo the same development as the latter.

P. 125, "Now to maintain that a lobar pneumonia *terminates* by a catarrhal pneumonia, as Rindfleisch, Buhl, and not a few others have imagined, is a pure travesty of the whole subject of inflammation." This sentence appears to us to justify the statement in the review. That such a termination does occur is the view or opinion of Rindfleisch and Buhl. This view Dr. Auld looks on as a travesty of the whole subject of inflammation.

Finally, on a reconsideration of the whole matter, we fail to see that we have done Dr. Auld any injustice. We had no object, and certainly no wish, to do other than write fairly of his work. As we have said, we differ from him in many points, and in others we fail to understand clearly what his own views are, owing to the obscurity with which they are expressed; but we think that there are few persons moderately acquainted with pathology who will look on our review as unjust or as being so full of random statements as Dr. Auld considers.

ACROMEGALY.

In the October number of the *Occidental Medical Times*, Dr. Geo. B. Somers, of San Francisco, reports a case of acromegaly. In discussing the ætiology, he dismisses as untenable Klebs' theory that the disease is due to a persistent thymus gland—and in Dr. Somers' case no thymus was found—and Freund's, that it is "an inversion in the evolution of the reproductive life." Unfortunately the autopsy was hastily performed, and neither the cerebro-spinal nor the sympathetic nervous system could be examined, so that Marie's theory—that acromegaly is "a dystrophy allied to myxœdema and affecting some organ (as yet unknown, but possibly the pituitary body) of trophic functions, whose relations are to acromegaly as those of the thyroid gland are to myxœdema"—was not tested in this case. The imperfect autopsy threw no light on the pathogeny of the affection.

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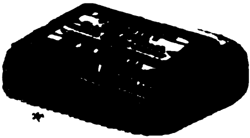

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THE DUBLIN JOURNAL
OF
MEDICAL SCIENCE.

MAY 2, 1892.

PART I.

ORIGINAL COMMUNICATIONS.

ART. XVII.—*The Dietetic Treatment of Enteric Fever.*[a] By WALLACE BEATTY, M.D., F.R.C.P.I.; Senior Assistant Physician to the Adelaide Hospital, Dublin.

THE dietetic treatment of enteric fever is a subject well worthy of consideration, both on account of its frequent occurrence and because there does not seem to be a perfect unanimity amongst the profession on the dietetic treatment of this disease, more especially in regard to the quantity of food which may be given.

Of the specific fevers which are commonly met with, enteric fever is remarkable for its tendency to relapse; the question, herefore, of the cause of relapses is an all-important one. On he view which each physician holds regarding the influence of rrors in diet in bringing about a relapse will depend in great measure the care he takes as regards both the nature and quantity f food. If enteric fever is due, as is accepted, to a specific poison n the first instance, a true relapse, which is understood to mean a epetition of the illness—there being involvement of fresh Peyer's atches, a fresh outbreak of rose-spots, and a renewal of the fever—must be due to the same specific poison. This being so, a relapse must be brought about in one of three ways:—1. Exposure to resh infection; this view has been advocated by some writers. . Part of the original poison remains somewhere in the system, and has not been developed. 3. The poison thrown out into the intestinal canal in the course of the disease, or that which has been absorbed into and lodged in the mesenteric glands, reinfects the patient. The first theory—viz., that all relapses depend upon exposure to a second infection, either by the patient having remained in the same place where he originally acquired the infection and so having become infected again, or by two distinct infections having occurred during the period of incubation before the outbreak of the primary illness (the primary illness having been short, and so the susceptibility of the disease not having been exhausted) is shown by Liebermeister to be untenable; for, he argues, patients get relapses who are removed from all sources of fresh infection, and relapses occur in many cases after a primary attack of ordinary duration; consequently, this view, even if it may explain some cases, cannot account for all. Liebermeister's conclusion is—"Relapses are usually due to the same infection that caused the original attack; part of the poison must have remained latent somewhere in the body, not developed during the first attack, not destroyed or expelled, and not beginning to mature until afterwards."[a] This is the second possible cause of relapse. The third possible mode by which a relapse is brought about—viz., reinfection by the products thrown out in the course of the illness—has been advocated by Maclagan, who believes that healthy glands become inoculated by the slough thrown off by those first affected, and he maintains that relapses are met with only when there has been constipation during convalescence. In opposition to this view, the observations of others tend to show that relapses occur just as frequently when there has not been constipation, and a further difficulty in accepting this theory is pointed out by Murchison—viz., that the glands affected in relapses are higher up than the sloughing glands involved in the primary illness, and, consequently, inoculation by the slough can hardly occur. Possibly the mode by which a relapse is brought about may be different in different instances—some patients may get a second infection; in other cases, a part of the original poison may remain undeveloped until after the primary illness is over; while in others the poison thrown out in the course of the disease may reinfect—but, whatever be the true explanation, one point is clear, a relapse implies that the susceptibility to the disease is not exhausted in the patient who is the subject of the relapse. The question at once arises—

---

[a] Read in the Section of Medicine of the Royal Academy of Medicine in Ireland, n Friday, January 5, 1892. [For the discussion on this paper see page 238].

---

[a] Von Ziemssen's Cyclopædia.

Why are relapses so much more common in enteric fever than in the other specific fevers—*e.g.*, typhus, measles, scarlatina? I have only once seen a relapse in measles; this occurred in a man who was admitted into the Adelaide Hospital a few years ago, suffering from measles; he had only been ten days convalescent from the same disease, for which he had been under treatment in Cork-street Fever Hospital. Bristowe, in his "Practice of Medicine," alludes to such cases as occasionally, though rarely, occurring.

Before proceeding to the discussion of the question—"Why are relapses so common in enteric fever as compared with other fevers?"—another question presents itself, viz., "How can one be quite sure in a given case that a true relapse has taken place, and that the symptoms are not due to further changes taking place in the already diseased intestinal glands and not to fresh changes occurring in glands which escaped in the primary illness?" I think it is by no means an easy question to decide, and, in many cases, I believe, so-called relapses are merely recrudescences of the primary illness. We find, on examining the statistics of different writers on enteric fever, a strange variation in the percentage of relapses. Thus, Biermer had relapses only in 3$\frac{3}{10}$ per cent. of his 1,136 cases. Bäumler in 73 cases had relapses to 11 per cent. If we are to consider that an apparent convalescence—as evidenced by apyrexia for a few days, disappearance of spots, and general improvement in the condition of the patient—followed by fresh fever of fourteen to twenty days duration and fresh spots, is a certain proof that a relapse has occurred, no doubt it occurs commonly; but if we study each of these points separately we shall see that the diagnosis of a relapse is not easy. For, firstly, as regards the temperature, the fever sometimes comes down early before the illness can have had time to run its course; in such a case a second rise could hardly be looked upon as a relapse. Secondly, if the spots are few, it is possible that the old ones may disappear before a fresh crop appears; and if the interval between the two crops coincided with a normal temperature, the case might look like a true relapse. Moreover, there is often a return of appetite and an apparent convalescence early in cases when we can hardly feel justified in considering that the primary illness is over. Murchison alludes to a statement of Sir William Jenner (to which he takes exception), who expressed the opinion that, except in a case of relapse, fresh spots never appear after the thirtieth day, and that febrile symptoms after that date are always due to some incidental complication. Should the fact of apyrexia occurring after a period of four weeks be an invariable proof that the primary illness is over, the diagnosis of relapse would be easy; but we cannot lay down any definite duration for the primary illness. Many cases last much longer than four weeks without any apyrexial period. Therefore, we are forced to regard this prolonged pyrexia as due to the primary illness, unless we are to adopt the suggestion thrown out by Murchison, as a possible explanation of prolonged cases—viz., that in these cases a true relapse may overlap the primary attack without any apyretic interval.

Lastly, the proof that there is such a condition as a true relapse depends upon the examination of the intestines in fatal cases. Even then, care must be exercised in the examination, as it is, I think, common to find, in cases which are fatal during the primary illness, glands ulcerated in the lower part of the small intestines, and swollen, without ulceration, higher up—the involvement of the glands proceeding in the order, as to time, from below upwards. The only pathological proof, therefore, that convalescence had taken place, and was followed by a relapse, would be the presence of cicatrising ulcers along with swollen glands, and the fact that so long a time had elapsed from the commencement of the illness that glands, primarily affected, could not be in a state of simple swelling only. Trousseau, as Murchison states, denied that any fresh disease of the bowel occurred. Trousseau writes—"To explain the intensified returns of the fever, and the successive eruptions, we must suppose that the morbid poison has not exhausted itself in the first outbreak, and that the economy, to get rid of it, requires repeated efforts. These returns of the fever are neither relapses, nor still less are they new attacks; it is the same attack, the symptoms of which, temporarily interrupted, recur under the influence of the same morbid cause which produced them in the first instance. However complete the symptoms may be, and although the eruption reappears, the characteristic intestinal lesion never returns." This view is not accepted by Murchison and other competent observers. If we grant, therefore, that relapses do occur and are common, the question, as stated above, arises—"Why are they so much more common in enteric fever than in the other specific fevers?"

The fact that the lesions in enteric fever are in the intestines and so are exposed to the direct contact of food more or less altered by digestion, has naturally suggested the theory that relapses are brought about by errors in diet. Most writers on enteric fever seem to give little countenance to this view, as they fail to comprehend how an illness due to a specific poison can be reproduced by any other influence except the poison. Certainly, it is hard to understand how errors in diet can act in bringing about a relapse. I feel convinced, however, that some, at least, of the relapses I have seen were due to errors in diet. In two of my cases solid food, brought surreptitiously by friends of the patients, seemed to act as the cause. Liebermeister, who believes that errors in diet may bring about a relapse, remarks—"As a matter of course, the injury produced by any such means can only serve as an exciting cause to processes that follow, stimulating the development of germs which would otherwise have remained dormant for a time, or which might even have been eliminated from the body."

An argument that if true relapses can be brought about by errors in diet they should occur oftener, may be met by the answer that errors in diet, to produce a relapse, must be made in cases of patients whose susceptibility to the disease is not exhausted.

Whatever view may be held as to the genuineness of so-called relapses, and whatever theory may be held as to the cause of relapses, I think the necessity for care in diet, considering the position of the lesions, must be admitted. It is impossible not to believe that grave injury may be inflicted upon the inflamed and ulcerated bowel by want of care in both the nature and quantity of food. Still, I believe, sufficient care is not exercised in this matter. While most physicians are agreed upon the advisableness of liquid food, many show too little regard as to the quantity of this liquid food which they allow. Indeed, it seems to be the idea of many practitioners, to judge of them by their practice, tha provided they are careful as to the nature of the diet, the quantity is of no great importance; the patients are allowed to take as much as they or their attendants desire. Most text-books say little about the quantity permissible; yet the quantity of food per
sible is just as important a consideration as its nature, and n
harm may be done by excess of allowable food. It is pleas of
see that Dr. J. W. Moore, in his recently published "Tex ients
of the Eruptive and Continued Fevers," does not lose hyp
this important point. I shall consider first the kind of
then the quantity of food permissible. ium will

Milk is, unquestionably, the best and safest food

patients; given diluted with a little soda-water, lime-water, or plai
water, it agrees well with most patients. If there is diarrhœa, i
is best to give it boiled; otherwise boiling is unnecessary. Som
times it is necessary to peptonise the milk. If a patient can tak
milk, milk alone is the best food during the entire illness. If mil
is vomited, or curds are passed by stool, whey may be advantag
ously given ; if whey is given, beef-tea with the grounds, or bee
juice, should be given along with the whey to take the place o
the albuminate casein. With regard to beef-tea, some object t
its administration on the ground that it causes gaseous decomp
sition in the intestine, and so increases the tympanites. I hav
not found this to occur. I consider that beef-tea is a useful addi
tion to milk diet when the patient is unable to take a sufficien
quantity of milk. It seems also to act as a stimulant.

Farinaceous foods are often given. I am not in the habit o
giving them to enteric patients. I object to them on two grounds—
firstly, I think they may cause troublesome flatulence, and ma
increase the fever, and, if given early in convalescence, may cau
a fresh outburst of fever; secondly, they are not needed whe
sufficient milk can be taken. In a severe attack of enteric feve
the salivary glands are quite inactive, and certainly no digestio
of starchy food can take place in the mouth. No doubt, in healt
the saliva plays an insignificant part in the digestion of starc
food; still, it is, perhaps, not unlikely that when the salivar
glands are inactive, the amylolytic ferment of the pancreas i
inactive too. If starchy food is given, it can be given only in
thin semifluid form, except in the mildest cases.

Beaten-up eggs are given by many physicians. I seldom giv
them. I think when sufficient milk can be taken, eggs are unne
cessary, and I am doubtful if they are well digested by enteri
patients. Of course, when patients cannot take milk the admin
istration of eggs may be absolutely necessary. They ought
then, to be given raw, beaten-up, and well diluted.

Having considered the nature of the food permissible, I shal
now consider the quantity. In my opinion, two to three pints o
liquid nourishment in the twenty-four hours is ample food fo
adults, less, proportionately, for children. By care in the quan
tity and the nature of the food, many of the symptoms which ar
liable to give trouble are more easily controlled.

Diarrhœa.—Avoidance of excess of liquid food is the be
general means of counteracting this symptom. In my experienc

I have had very little trouble from diarrhœa, and I am convinced that this has been due mainly to the care taken in avoiding excess of food. Patients have been under my care in the Adelaide Hospital who before their admission were allowed what I should consider a great excess of food, and who had excessive diarrhœa; these patients on restricted diet were almost at once relieved of this symptom. One patient, who before his admission to the hospital had been getting two quarts of milk and three beaten-up eggs, with stimulants in addition, in the twenty-four hours, and had profuse diarrhœa, was no longer troubled with it on restricted diet. I have had constipation to deal with much more frequently than diarrhœa. With regard to constipation, I think it is well not to allow more than two days to pass without a motion from the bowels, unless the patient has had a severe hæmorrhage previously. There is one important reason for ensuring an action from the bowels at least every second day—viz., to avoid trouble from accumulated fæces during convalescence. In cases where there has been constipation I have known distress occur during convalescence from hardened fæces in the colon. The objection that when the diet is limited as I have indicated constipation results, is, I consider, of little weight, as constipation can very easily be remedied.

Hæmorrhage.—This symptom, like diarrhœa, is best guarded against by restricted diet. A man under my care in the Adelaide Hospital got a severe hæmorrhage from his bowels, which followed directly the administration of an excessive quantity of milk, the nurse having yielded to his clamour for abundance of milk. For several days after the hæmorrhage I feared to allow him more than one pint of whey, with stimulants, in the twenty-four hours. He made a good recovery. Excess of diet will predispose to hæmorrhage by increasing the inflammatory changes in the ulcerated bowel.

Tympanites.—This symptom is kept under control by limiting the quantity of food. By care in the diet tympanites does not often give trouble.

Sleeplessness.—It is seldom necessary to resort to large doses of hypnotics when care is taken to avoid excess of food. Patients sleep much better on a carefully restricted diet, and often no hypnotic is needed.

Delirium.—I think if excess of food be permitted, delirium will give more trouble.

High Temperature.—Perhaps unnecessary alarm is sometimes shown if the temperature touches a high point, 104°–105° Fahr., and perhaps harm may be done by too hasty a resort to antipyretics. Antipyretics are seldom called for (with the exception of the always useful and grateful tepid sponging), unless the temperature remains persistently high morning and evening for a few days—a high evening temperature, 104°–105° Fahr., while the morning temperature is one or two degrees lower, does no harm. Of course if a very high temperature is reached, antipyretic remedies must be used. I think the temperature is also, like the other symptoms above discussed, influenced by the quantity of food. Dr. Head has told me that he often observed a marked improvement to occur in the general symptoms when from any cause, such as threatened hæmorrhage, the quantity of food had to be reduced to a minimum. The question arises—"Is the limited quantity of food above recommended sufficient for the patient's nourishment?" Well, it is very doubtful if, when the digestive powers are so much impaired as they are in enteric fever, a patient can digest more; consequently, any food which escapes digestion must act as an irritant to the diseased intestine. I cannot do better than quote Broadbent in this connection:—"The attention of the medical attendant will in most cases be required rather to moderate the amount of food given than to urge its administration. . . . The key to the regulation of the diet—it may almost be said to the management of the patient—is to be found in the careful inspection of the stools; . . . . when curds appear in the dejections, either too much milk is taken, or too much at a time, or its digestion is interfered with. If the passage of undigested milk is not remedied, there will certainly be flatulence, discomfort and restlessness, elevation of the temperature, and in most cases diarrhœa."[a] Broadbent recommends as the diet, two to three pints of milk, and a pint or pint and a half of beef-tea or some equivalent; this is rather more than I am in the habit of giving—his maximum being four and a-half pints of liquid food—but his diet is very restricted as compared with what is allowed by many practitioners.

Another matter for consideration is, "May simple drinks be allowed *ad libitum* to relieve thirst?" Sir William Jenner[b] says:—"Patients suffering from typhoid fever should be allowed an

[a] Typhoid Fever—Quain's Dictionary of Medicine.

[b] Treatment of Typhoid Fever.—Lancet, Nov. 15, 1879.

unlimited supply of pure water." Broadbent allows this also; he writes:—"The patients should, of course, be allowed to drink freely of cold water, toast-water, or any simple drink." With all deference to so great authorities, I am disinclined to sanction such great freedom, and, indeed, I cannot say that I have found thirst so very distressing as to call for an *unlimited* supply of simple drinks. I should fear that unlimited freedom in the use of simple drinks would cause abdominal discomfort, and, perhaps, diarrhœa. Water in moderate quantity, pieces of ice, and a little lemonade are, I think, sufficient. Tea, morning and evening, is also very grateful and safe.

Whatever diet is adopted in a given case, it is, I think, well not to alter it much in the course of the illness, as the digestive tract in enteric fever is very sensitive to alterations in food. The plan of treating enteric patients, as one would treat a chronic invalid—viz., making alterations in the food from day to day—is, I think, dangerous, and certainly not called for.

There is another point in treatment which is worthy of attention; it is this—towards the end of the third week, when the ulcers are formed, it is often well to lessen somewhat the quantity of food.

A very important consideration is, "When may a patient be regarded as convalescent, and allowed a change in diet?" The guides are, the presence or absence of spots, the temperature, the tongue, the condition of the abdomen, the size of the spleen, and the stools.

1. *The presence or absence of spots.*—I am sure that all physicians are agreed that though the patient may appear convalescent, and every febrile symptom gone, the presence of enteric spots is proof that the illness is not over. One occasionally sees enteric spots, when every other symptom of the illness is over. Of course, no conclusion can be drawn when spots are absent, as they are often absent all through the course of enteric fever.

2. *The temperature.*—This is a very important guide. Murchison writes:—"Convalescence can only be said to be fairly established when the temperature is normal on two successive evenings." The temperature should, I think, be normal for at least a week both evening and morning before a change in diet be allowed. It is well to take into consideration also the mode in which the temperature has come down before it reaches

the normal; whether very gradually or quickly; if the temperature has fallen gradually, a week of complete apyrexia is generally sufficiently long to withhold more food; if there has been a rather sudden fall, this time is not sufficient. But though the temperature is a very useful guide, it is not an infallible one. Cases of enteric fever occur in which the temperature remains normal throughout the greater part of the illness; and, on the other hand, complications may arise during the illness, the effects of which may last after the enteric lesions have healed; which complications, while they keep up the fever, do not necessitate a restricted diet. To sum up: a normal temperature is an important, but not a certain guide that convalescence has begun; a high temperature, provided there is no complication present, is an almost[*] certain guide that convalescence has not begun.

3. *The condition of the tongue.*—I think that the only help that examination of the tongue affords as to whether convalescence is established or not is this: if the tongue is dry, the illness is not over; it generally becomes clean when convalescence commences, but certainly not always so; the coating will, in many cases, not clear off until solid food is given, and then it is often remarkable how rapidly the tongue cleans.

4. *The condition of the abdomen.*—It must have lost its tympany.

5. *The size of the spleen.*—The examination of the spleen is most important. Excepting cases in which the spleen has been, previously to the illness, enlarged from some chronic condition, its enlargement contra-indicates a change of food. I have more than once seen patients, apparently convalescent, but with a palpably enlarged spleen, get a return of fever, when I was tempted by the disappearance of the other symptoms to allow a change in diet. With regard to enlargement of the spleen in enteric fever, Liebermeister writes: "Gerhardt makes a statement that in many cases in which a relapse takes place, the enlargement of the spleen is not at all diminished during the non-febrile period that intervenes between the original attack and the relapse." Perhaps in many of such cases of so-called relapse, the condition is rather a continuance of the primary

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[*] I say "almost," as occasional exceptions do occur, in which the temperature remains above the normal, unaccountably, long after every other symptom of the illness is over.

illness, with a fresh outburst of fever. I should be disinclined to consider convalescence as begun if the spleen remained palpably enlarged.

6. *The character of the stools.*—If they are fluid and light in colour, convalescence has not begun.

The frequency of the pulse does not serve as a guide, as it may not only be slow during the entire illness, but it may be frequent during convalescence. Murchison writes: "The pulse may be quicker than during the fever." I have noticed this increased frequency in some cases. To recapitulate: Convalescence from enteric fever may be regarded as begun—if there are no spots present, if the temperature is normal for at least a week, if the tongue is moist, if the abdomen is not tympanitic, if the spleen is not enlarged, and if the stools are formed and of a natural colour.

When convalescence has begun, the next consideration is as to what is the safest way to change the diet. I think that the safest way is to increase very gradually the consistence of the food. A sudden change from liquid to solid is often followed by a fresh outburst of fever. The digestive tract, long accustomed to liquid food, cannot tolerate, as a rule, a sudden great change in its consistence. For a few days, indeed, it is safer to increase the quantity of the food which has been given during the illness rather than to make any change in its nature. I change the diet much as follows:—first, I give milk thickened with cornflour or arrowroot; then, after a few days, a lightly-boiled egg and a few plain biscuits, then bread, then fish, and so on; all along I watch the temperature carefully, so as to letect at once any rise of temperature, should it occur, as a rise would indicate, in most cases, that the food was being increased oo rapidly, or injudiciously.

A very natural question may be asked: "Granted that many ases require such extreme care in diet, is it necessary to be so particular in every instance? May not more laxity be allowed n mild cases?" This question is best answered by another: What is meant by a mild case?" If it is meant a case with mild symptoms, laxity may not be allowed without risk, as, ndoubtedly, many apparently mild cases occur which suddenly et grave symptoms and die, and *post-mortem* examination eveals an amount of disease out of all proportion to the earlier ymptoms. Such surprises may not be common, but they do occur. If it is meant by a mild case a case with only slight intestinal disease, more laxity may be allowed; but how are such mild cases to be recognised with perfect certainty? They cannot be. Therefore, if it is granted that care in diet is necessary in some cases, it is best to take it in all. I believe that while it may be true that those who give abundance of food in every case, or those who allow such abundance in the apparently mild cases, are likely to have more rapid recoveries than those who do not, the latter are more likely to have fewer fatal cases.

The experience I have had has led me believe—

1. That most cases, if not all, are best treated by liquid food in limited quantity—at most three pints; this food being chiefly or entirely milk.

2. That by thus limiting the quantity of liquid food, diarrhœa, hæmorrhage, tympanites, sleeplessness, and delirium will be more easily controlled.

3. That errors in diet cause frequently a renewal of the illness, which in its clinical features is exactly what most writers on enteric fever would regard as a relapse.

I have dwelt so strongly on the dietetic treatment of enteric fever, because I consider it a matter of very great importance, and because it is mainly as regards diet that physicians differ from each other in their treatment of this disease. I do not mean to imply that I consider other points in the treatment of enteric fever as of little importance.

ART. XVIII.—*Further Observations on the Causes and Treatment of Dysmenorrhœa.*[a] By THOMAS MORE MADDEN, M.D., F.R.C.S.Ed.; Obstetric Physician and Gynæcologist, Mater Misericordiæ Hospital, Dublin; Examiner, Conjoint Board, Royal College of Surgeons and Apothecaries' Hall, Ireland; &c.

IN none of the many branches into which modern medicine has become subdivided has such rapid progress been effected during the last decade as in that within which the special study of diseases peculiar to women is included. Nevertheless, this development might probably have been still greater were it not for the occasional evanescent prevalence in matters gynæcological of theoretical dogmas which are not borne out by subsequent experience, or by the attempted displacement, on possibly inadequate grounds, of well-established doctrines, such, for instance, as those heretofore generally accepted concerning the ætiology and treatment of difficult or painful menstruation.

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[a] Read before the Section of Obstetrics in the Royal Academy of Medicine in Ireland, on Friday, March 18, 1892.

Under these circumstances, the rediscussion of even the most familiar subjects connected with the practice of gynæcology may from time to time become an inevitable necessity, and at the present date that appears to me especially the case with regard to the causes and treatment of dysmenorrhœa, one of the forms of which was brought under the notice of this Academy in a communication of mine a few years ago. Since then some more recent doctrines in reference to this complaint have been propounded on high authority, which, if generally accepted, must to a large extent revolutionise the ideas and methods of treatment heretofore generally adopted as to this complaint. Before that consummation is arrived at it may be well that those statements, and the practice founded thereon, should be carefully considered and tested by a comparison of the clinical experience of gynæcologists who have not as yet, at least, seen cause to recant their earlier teaching with that of those who have been converted from the possible errors of their former ways in this respect. Therefore, I now submit to the Academy the following recapitulation of some of the points now controverted with reference to those views, by acting on which, as I think, the most satisfactory practical results may be secured in the treatment of dysmenorrhœa.

Pathological Importance of Dysmenorrhœa.—Of all those disorders of menstruation which furnish a large proportion of the gynæcological cases treated in the hospitals with which I am connected, dysmenorrhœa is that most frequently noted, not only at the earlier catamenial periods, but also in later or married life. In the former this trouble commonly comes before us in association with one or other of the manifold reflex or sympathetic nervous or constitutional derangements traceable to the imperfect accomplishment or evolution of the catamenial function in cases of difficult or painful menstruation; whilst in subsequent years it is no less often brought under clinical observation as one of the evidences of some of the local causes of infecundity. In regard, therefore, not only of the intensity of the immediate suffering attending well-marked dysmenorrhœa and the complexity and possible gravity of its consequent reflex nervous and constitutional disturbances, but also in view of its direct bearing on the fertility of the patient, the now disputed ætiology and treatment of this disorder, however inadequately they may be introduced by the present writer, are entitled to the careful consideration of this Academy.

Frequency of Painful Menstruation.—As already observed, dysmenorrhœa is brought under clinical observation more frequently than any other catamenial derangement. Thus, for instance, in the last 1,000 gynæcological cases of every kind noted in the out-patient department of my hospital, in 189 instances some menstrual disorder was especially complained of—viz, dysmenorrhœa in 110, amenorrhœa in 42, and menorrhagia in 37 cases. These figures, although they cannot be perhaps regarded as representing the exact proportion of each of these complaints (inasmuch as, whilst many women may long suffer from amenorrhœa or menorrhagia before obtaining medical advice, few patients can long withstand the periodic recurrence of the tortures of acute dysmenorrhœa without seeking relief), nevertheless at least show the greater frequency with which, in the instances referred to, such cases were brought under my clinical observation, and help to prove the fact that dysmenorrhœa is here, as elsewhere, the most frequent of the catamenial complaints that come before us.

Classification of Dysmenorrhœal Cases.—In the clinical records of the hospital on which the foregoing statement as to the frequency of dysmenorrhœa is founded, it was deemed advisable to classify in some way the different cases and forms of dysmenorrhœa there noted, and for this purpose their ordinary subdivision under the three headings of "neurotic, congestive, and obstructive dysmenorrhœa" was followed. But however convenient for reference or description any arrangement such as this may be, it must at best be merely arbitrary and often inapplicable, being obviously founded on the greater or lesser predominance in each instance of one or other of the special symptoms of the coexistent neurotic or inflammatory condition, or of those still more directly due to local and mechanical causes. It, therefore, cannot be too explicitly stated or too often reiterated that in every case and form of dysmenorrhœa there is one common factor in the causation of the complaint to be reckoned with—viz., some obstruction, physical or mechanical, to the free escape of the catamenial outflow, which impediment may be due either to the condition of the parts concerned in the menstrual function, or to the character of the resulting discharge; and on the recognition and removal of that obstacle, whether by constitutional remedies, as may be possible in certain instances, or by local measures, as is necessary in a far greater number of cases, will be found the key to the general pathology and successful treatment of painful menstruation. This general statement is, I think, equally applicable to every variety of dysmenorrhœa, not only in its uterine forms, to which the following observations are chiefly confined, but also to those no less important cases in which the causes of the complaint are traceable to the condition of the ovaries or of the Fallopian tubes, and to the consideration of which I hope, possibly, to be able to return on a future opportunity.

Obstructive Dysmenorrhœa.—On this subject my experience and pinions are wholly at variance with those of Dr. Champneys, who, n his "Harveian Lectures on Puerperal Menstruation," expresses ery forcibly his incredulity with regard to the considerable nfluence heretofore commonly, and as I believe correctly, ascribed mechanical obstructions from flexions or stenosis of the cervical anal as causes of spasmodic dysmenorrhœa. "Until the last few ears," he says, "the question of the pathology of spasmodic dysenorrhœa was considered settled by a very lucid and intelligent xplanation known as the 'mechanical system of uterine pathology.' he theory of this pathology was that it was owing to obstruction the escape of the menstrual fluid, due to flexions of the uterus to stenosis of some part of the canal. Other elements are cited the shape of the texture of the uterine tissue and disorders of e uterine circulation by flexion. They are thus summarised—) Flexion of the uterus causing obstruction; (*b*) Stenosis connital, due to swelling of the mucous membrane, fibroids, polypi, pertrophy, increased flow of blood; (*c*) Chronic congestion of e uterine walls, due to flexion." . . . "We have now gone rough the whole series of statements in favour of the mechanical ory of dysmenorrhœa, and have found that most of them are variance with facts as ascertained, while many of them are nded on interpretations which are capable of being reviewed m another side, and are most probably erroneous. It seems to that had the facts as regards flexions, stenosis, and the uterine culation been ascertained before propounding a theory, the chanical theory of dysmenorrhœa could never have been pronded. To ascertain the facts that have now rendered it enable has been the work of years; but this is not the only instance in medicine of the labour entailed on innocent persons by the promulgations of a theory on insufficient grounds. Some of the most important work has appeared in the *Archiv für Gynækologie*, but, it is curious, even quite recently the Germans, who cannot be ignorant of Vedeler's papers, speak as if the facts were still debatable, or as if they had appeared abroad, instead of in the principal place of resort for such papers, in the whole German current literature. I am inclined to think that in matters of science Englishmen live less on an island than other people. I trust that in the above remarks I shall not be interpreted as questioning the good faith of the theorists, but only as criticising their scientific methods. It is true that no theory can be developed without the aid of the imagination, but all ideas should be kept in limbo until they have been subjected to the severest criticism by their parents. It is also true that, what is true is generally simple. But the converse—what is simple is generally true—by no means holds; and the mechanical theory seems to be an instance of such logic."

In the able Lectures from which the foregoing observations are taken we have, I think, some evidence that Dr. Champneys' own logic is not altogether free from such fallacies as he ascribes to the supporters of the mechanical theory of dysmenorrhœa. However, without attempting to discuss that question, I may at least, in reply, state that in many hundreds of instances patients labouring under spasmodic dysmenorrhœal suffering have now con under my care in hospital and private practice in whom, on carefu examination, no other cause could be assigned for the symptom complained of than the existence of stenosis of the cervical cana or its constriction by some flexion. And in such cases the operati treatment of the stenosis or the rectification of the flexion, withou any other treatment, was followed by the complete and, as far as know, permanent cure of the dysmenorrhœa. Therefore, unle Dr. Champneys, or anyone else, can offer a more logical explanati of these facts than that to which my possibly illogical mind woul lead me—viz., that in those cases the cause of the patient's mont spasmodic suffering was obstruction, and its cure was effected the mechanical measures I employed—I shall adhere to my ow opinions and practice, and would venture to recommend oth practitioners to act on similar views, until at least they obtai some proof (which it may, perhaps, be found difficult to affor that the doctrines of those who teach otherwise are founded larger and more accurate clinical observation or more successfu *results than* have been obtained from the methods of treatment heretofore adopted by myself and others in such cases. Relying on *that* experience, therefore, I shall now endeavour to put my views on this subject briefly before you.

Diagnosis.—Of the uterine causes of dysmenorrhœa, as well as of the commonly co-existing sterility of the patient in such cases, probably the most important, as well as the most curable, is obstruction, congenital or acquired, of the cervical canal. The consequences, immediate or remote, of this condition are daily brought under gynæcological observation, and unquestionably few of the complaints that come before us in our branch of practice give rise to more intense and persistently recurring suffering. Nor is there any disease which, when unrecognised as to the true cause, and hence, as is too often the case, treated by sedatives, spasmodics, and other equally ineffectual palliative remedies, may produce more serious ill effects, not merely on the general health, but also on the cerebro-nervous system of the patient. Hence the necessity in all cases of persistent uterine dysmenorrhœa (when not obviously of a purely nervous form) of careful local examination and the use of the sound, by which the existence, position, and cause of any uterine mechanical obstruction *to* the menstrual flux can be ascertained.

Causes.—Obstructive dysmenorrhœa may result—1st. From tenosis, congenital or acquired, of the cervical canal, and more specially of the os internum. 2nd. From constriction of the canal y an acute flexion. 3rd. From the presence of an uterine tumour. th. From obstruction occasioned by an intercervical neoplasm. n the majority of instances, however, this condition is consequent n simple congenital atresia of the cervical canal, or on its occlu-on by plastic exudations resulting from endometritis. The next ost commonly observed of these mechanical causes of dysmenor-hœa are the different flexions of the uterus. The frequency of e former class of cases is far greater than is generally supposed. hus, as I stated in a paper read at the Berlin meeting of the nternational Medical Congress, in my hospital nearly 11 per cent. instances of obstructive dysmenorrhœa or of sterility similarly used had been under observation in a total of 7,000 gynæcolo-cal cases.

Symptoms.—I need not here enlarge on the symptoms of obstruc-ve dysmenorrhœa, as these vary widely in each case in accord-ce with the situation, causes, and extent of the obstruction and the constitutional condition of the patient. The existence of obstruction, whether from stenosis, flexion, or pressure, may be commonly inferred from the character of the pains attending the uterine efforts to overcome the mechanical obstacle to the catamenial flux, these pains in such cases being extremely similar to the grinding or cutting pains of the first stage of labour, and often equalling, if not exceeding in intensity, the throes of parturition rendered difficult by persistent rigidity of the os uteri. Moreover, under such circumstances, we are very likely to have extension of the resulting irritation from the uterus to the Fallopian tubes or to the ovaries, producing all the symptoms of salpingitis or oöphoritis. After a variable period of suffering, in most instances, the obstruction is at last temporarily overcome, and the dysmenorrhœal dribble is eventually succeeded by a profuse menorrhagic discharge, after which the patient's troubles are over for that month. In some instances the obstruction proves more intractable, and the pain continues until the catamenial flux has ceased, or the uterine action, as occurs in some instances, forces the retained menstrual fluid through the free orifices of the Fallopian ducts, and so may give rise to pelvic peritonitis or hæmatocele.

Treatment.—In any case of obstructive uterine dysmenorrhœa it is obvious that the only rational course of treatment is the removal of whatever may be the physical impediment to the escape of the menstrual fluid, and that in such cases no curative effect can be expected from any drugs, however useful some of those may be as palliative agents. Thus, for instance, if catamenial pain be due to an acute flexion, the dysmenorrhœa can be cured only by rectification of the malposition; or if occasioned by pressure on the cervix of an uterine or other tumour, this must be removed or pushed well up above the pelvic brim. In like manner in those far more numerous cases in which the difficulty arises from cervical stenosis, this must be overcome before we can hope to remove the menstrual suffering.

Dilation of the Cervical Canal.—I do not propose in this connection to rediscuss the various means from time to time suggested for the mechanical dilation of the cervical canal in cases of obstructive dysmenorrhœa; nor need I here refer again to the history of the successive steps (of which an account may be found in my previous communication to the Academy on the subject) by which the formerly-employed methods of expanding enosed passage by means of sponge tents, laminari bougies, and other similarly tedious, painful, and often hazardous appliances, have now become generally replaced by rapid dilation with the assistance of one or other of the instruments devised for that purpose by Lawson Tait, Hegar, Duke, and others, including myself.

With regard to bi-bladed expanding instruments of this kind, such as Duke's or mine, Dr. Champneys says, "Two or three-bladed dilators are bad instruments; they stretch the cervical canal unequally and are liable to tear it. They are out of fashion in England, though not apparently in America or on the Continent." The first of these assertions is merely a statement of Dr. Champneys' individual opinion, which, however emphatically expressed, is not, as far as I am aware, entitled to any greater consideration than he apparently accords to the experience to the contrary of those who, like myself, have largely and advantageously used the instruments of which he disapproves. Whilst, with regard to the second point, it seems obvious that if, as Dr. Champneys has persuaded himself, dilators of the class in question were actually "out of fashion in England," there should be little, if any, demand for them, inasmuch as a taste for acquiring gynæcological instruments is one not generally indulged in save by those likely to use such appliances. Therefore, as I am sure that Dr. Champneys will be glad to have any error of his, however trivial, corrected, I may observe that I have very recently been informed by one of the principal London surgical instrument manufacturers—viz., Messrs. Arnold & Son—that they "have sold some hundreds of these dilators since their introduction." Hence, two-bladed cervical dilators can hardly be regarded as out of fashion in England, and, I may add, probably never will be so in any country as long as women continue subject to obstructive dysmenorrhœa and are judiciously thus treated by cervical dilation for that complaint. Be that as it may, however, at any rate I still prefer the dilator I introduced here some years ago, and which has been subsequently modified nd thus rendered more effective for its purpose. This instruent, the latest pattern of which I now exhibit, differs from hers of the same class in the circumstance that the expansion fected therewith is in imitation of the natural process of uterine latation during menstruation — viz., from the os internum wnwards in the course of the cervical canal—and, from bsequent experience of its use in many hundreds of instances of obstructive dysmenorrhœa, I would recommend it to other gynæcologists as an effective and, when properly used with due caution and in suitable cases, a safe means of rapidly overcoming cervical stenosis, and so relieving consequent dysmenorrhœal pain.

The Use of Metrotome, &c.—In such cases I regard the use of any cutting instrument as, generally speaking, unnecessary, occasionally giving rise to troublesome hæmorrhage, and still more objectionable by reason of the liability of the cervical incision to become a portal for the introduction of sepsis, as I have seen exemplified in more than one instance. In some few exceptional cases of dysmenorrhœal stenosis, however, the obstruction may be so unyielding that it cannot be overcome by any available method of dilatation, and such cases may probably be best dealt with by the cautious use, with due aseptic precautions during and after the operation, of Sims' knife, or else of a single-bladed metrotome, such as Simpson's, preferably to any of the more recent instruments of the same kind. Whilst as to scissors such as Keuchenmeister's, the use of which is still recommended by some writers in the cases now under consideration, all I can say is that their employment appears to me likely to expose the patient to all the septic dangers above referred to with little probability of relieving the disease for which they are employed, cutting, as they do, the os externum where obstruction comparatively seldom exists, into a gaping wound with everted or retracted lips, and leaving untouched the os internum, which, as I believe, is the actual seat of th stenosis in nine-tenths of these cases.

Maintaining Patency of Canal.—Whatever method of dilatati be adopted to effect the cure of obstructive dysmenorrhœa, it obviously essential that the patulous condition of the cervic canal should be permanently maintained. For this purpose, far as I know, no very generally applicable and effect means was available, with the exception of Dr. Greenhalg elastic stem, which I have used with advantage in ma instances, until a couple of years ago, when Mr. Duke, of Dub suggested the use of a spiral wire stem, to be introduced dir after operation and kept *in situ* until all tendency to sub quent contraction has been overcome. This suggestion w hich at first I was rather sceptical as to the advantag peared to me probable that the stem might prove only an immediate source of local irritation, but also subsequently a focus for sepsis. However, from a fair trial of this appliance, which I have now used very extensively, I can corroborate the advantages claimed for its employment. These stems, which are made by Messrs. Arnold, being extremely flexible and well open from point to point, may be left *in situ* for an almost indefinite period, provided always that due aseptic precautions be taken by regular daily vaginal irrigations to keep the passage and stem perfectly free from all morbid secretions. As a rule, however, I think that no stem should be worn continuously for more than a month; and in every case if, notwithstanding the precautions above referred to, any inflammatory trouble or septicæmic symptoms should supervene, it should, of course, be immediately withdrawn.

Congestive Dysmenorrhœa is of special clinical interest as a frequent result of chronic endometritis, and hence is more commonly met with later in life and in married women than other varieties of dysmenorrhœa. In the congestive condition on which the form of difficult menstruation is consequent, besides the uterus and its appendages, the other pelvic as well as abdominal viscera are usually more or less involved, as is more particularly seen in the frequently engorged state of the portal circulation in such cases. In most of these instances the tumefied uterus is, moreover, to some extent displaced, either by ante- or retroflexion or version from the greater degree of congestive hypertrophy that may be developed in one or other of its walls, or else is forced down lower than its normal position in the pelvis by its generally augmented bulk and weight. In the same way the functions of the rectum and bladder are interfered with, a certain amount of cystitis or vesical irritability or hæmorrhoidal trouble being seldom absent in cases of this kind.

Symptoms of Congestive Dysmenorrhœa.—For a few days before the menstrual period the patient generally complains of some degree of lumbar pain and sense of uterine weight and bearing down, gradually developing on the approach of the "change" into acute localised intermittent pain and persistent feeling of distension and discomfort in the hypogastric region, which steadily increases, and is followed by distinctly expulsive pains, accompanied by a scanty menstrual discharge, in many instances intermixed with membranous shreds or clots. This often abates or entirely ceases on the third or fourth day, and in some cases the discharge ceases for a day or so during the menstrual period, and then returns in intermitting gushes.

Treatment.—To cure congestive dysmenorrhœa we must, in the first instance, cure the abnormal uterine condition or hyperæmia of which the menstrual difficulty is symptomatic by those measures that have been fully described in my previous communication on endometritis. In all cases such as these, warm hip-baths and hot-water irrigations (per rectum et vaginam) are generally serviceable in the immediate relief of the catamenial pain, as in the same way are also the various time-honoured and well-known special uterine and general nerve sedatives and stimulants, such as castor, guaiacum, &c., to the use of which I need not here further allude. In the general treatment of congestive dysmenorrhœa it is of special importance to relieve abdominal and pelvic visceral congestion as far as possible by saline purgatives, such as a teaspoonful of Carlsbad or Glauber's salts in a half tumblerful of hot water once or twice a day; and with the same object of diminishing as far as possible the hyperæmia of these and other organs, nothing appears to me more generally serviceable in such cases than the free use of bichloride of mercury with iodide of potassium and bark.

In such cases local treatment must always be conjoined with the general remedies just referred to. In many instances, to unlock the uterine hyperæmia, free scarification of the cervix, followed by the glycerine tampon and hot-water irrigations, if persevered in for some time will prove effectual, and should be fairly tried in the first instance. In some cases, however, it will also be found necessary to resort to intra-uterine treatment by the dilatation of the cervical canal and the subsequent employment of the curette, by the use of which the diseased endometrium may be scraped away, whilst by the ensuing hæmorrhagic discharge the local congestion may most directly be dealt with.

Probably no one who has read my previous communication on the subject of obstructive dysmenorrhœa will accuse me of any tendency to minimise the importance of mechanical and operative treatment in such cases. But, at the same time, I am bound to observe that these methods are frequently pushed to an undue extent by practitioners who apparently ignore the fact that, common as is the obviously obstructive form of dysmenorrhœa, this complaint may also occur in cases arising from causes beyond direct or mechanical treatment of the kind—viz., as the result of ovarian or Fallopian tube disease, or as the consequence of a constitutional, neurotic, or hyperæsthetic condition, which may be best treated by attention to the general health of the patient. In the latter cases the most signal benefits are often derivable from the free use of nerve tonics, such as the preparations of valerian and its combinations, and more especially the valerianates of quinine and iron, together with bromides of sodium or potassium as nerve sedatives; and, if necessary, as a temporary measure, to allay extreme dysmenorrhœal pain, opiates and cannabis indica, which, in such cases, may be most advantageously given by the rectum rather than by the mouth or hypodermically. This fact is one of such practical importance, and is so generally neglected at the present day, that I may here cite the forcible terms in which it was stated in a paper "On the right use of Sedatives in Diseases of the Womb," published in the *Lancet* many years ago by Dr. Tilt, whose views on that subject are identical with my own experience. "He must indeed be young in practice," says the writer just named, "who is not aware how frequently pain and neuralgia, under various forms, appear as an important symptom of morbid menstruation, of diseases at the change of life, and of uterine and ovarian affections. Neuralgia in connection with the reproductive system is still more frequent in women of the upper classes, in whom a nervous temperament has been inherited and rendered more intense by injudicious schooling and by habits at variance with correct notions of hygiene. Suppose a patient suffering habitually from nervous uterine irritability, from bearing-down pains, vesical tenesmus, and severe pains in the sacrum and thighs, the necessity for edatives will strike everyone. Most medical men will give hem by the mouth, either in such moderate doses that the patient's sufferings will be long in abating, or, should the quanity have been sufficient to assuage the pain, the drugs may ave acted so strongly on the system that it would take some days to recover from the poisonous effects. Afraid of this, thers would apply sedatives to the pelvic regions or loins; but efore relief could be given much time must elapse, though, if he fomentations had been associated with sedative injections into the rectum, relief would soon be afforded, without any ubsequent ill effects, because the remedy being applied directly to the diseased nerve the dose could be proportioned to the intensity of the pain. Is it not, then, better to give sedatives by the rectum than to have a patient in an habitual state of suffering, or with the occasional variation of an overdose of opium? This is applying the remedy in the right place, or applying the sedative as near as possible to the suffering nerves."

Nervous or Spasmodic Dysmenorrhœa.—In early menstrual life probably the most frequent form of dysmenorrhœa is that described as neurotic or spasmodic, and, moreover, in every variety of this complaint, and at every age at which it may occur, the neurotic element to a large extent complicates whatever other cause painful menstruation may be dependent on; and hence the brief account which I have already given of the ordinary symptoms and general palliative treatment of dysmenorrhœal pain may be also applied to the nervous or neuralgic types of this affection.

In speaking of spasmodic dysmenorrhœa, Dr. Champneys institutes an analogy between the phenomena of asthma and the vaso-motor disturbances in the parts concerned in the causation of painful menstruation, which, in reference to structures and functions so widely dissimilar as those of the pulmonary and utero-ovarian organs, seems to me wholly untenable. The same writer makes another statement, viz.—"For if, as we have seen, the smallest cervical canal can transmit the menstrual fluid without sensible hindrance, much more can it admit the spermatozoa." In this little "if," however, lies the pith of this problem; for, in the first place, I for one deny that the smallest cervical canal can transmit the menstrual fluid without sensible hindrance, and, secondly, the comparison made between the viscid, or often shreddy or clotted, and *débris*-laden menstrual flux and the uniform opalescent and lubricating or semi-oleaginous seminal secretion can hardly be taken seriously. "It must be remembered," he further observes, "that uterine colic is not associated with spasmodic contraction of the uterus, though it may be associated with a condition of tetanus without narrowing of the canal as in after-pains. The great remedy is pregnancy and parturition."

If pregnancy and parturition, however, are not sufficient to ensure the multiparous patient against the common occurrence of after-pains, it may be fairly asked, how, in the name of common sense, can they remedy a tetanic condition of the uterus which is referred to as analogous to that giving rise to those after-pains? Admitting, however, that parturition at full term may cure dysmenorrhœa, I cannot believe in the cure of dysmenorrhœa by impregnation unless continuing to full term, as I have observed that patients under such conditions who may have become pregnant are particularly liable to abort at what would have been a menstrual period had impregnation not occurred, and that the subsequent dysmenorrhœal troubles were thereby but intensified.

Membranous or Pseudo-membranous Dysmenorrhœa, to which attention was first called by Morgagni, who, upwards of a century ago, observed the periodical expulsion of membranous casts or shreds with the catamenial flux in cases of painful menstruation, has been and is yet very generally described as a distinct and special form of the complaint under consideration. This view appears to be quite erroneous, however—the common occurrence of such shreds or clots in the menstrual discharge of dysmenorrhœal patients having been clearly demonstrated by Dr. John Williams in his conclusive statistics. Moreover, as was long since shown by Oldham and again by Bernutz, whose remarks as bearing on this point may be here briefly recapitulated, these products, which are composed entirely of the histological elements of the uterine mucous membrane and ought consequently to be ascribed to a disturbance of the ordinary physiological moulting of which the generative organs become the seat at each catamenial period, are occasionally met with in typical instances of each one of the three forms of dysmenorrhœa—*i.e.*, obstructive, congestive, and neuralgic, as already described. Nor is the membranous expulsion of such importance as a cause of painful menstruation as is commonly supposed. On the contrary, as Bernutz observed, "The difficulty arises from the morbid condition of the attached uterine mucous membrane, especially the cervico-uterine portion of it." "I willingly allow," adds Bernutz, "that the dysmenorrhœal membrane floating about the cavity of the uterus may occasion temporary difficulty to the exit of the menstrual fluid (acting as a ball valve), just as a clot might do, but I do not believe it would give rise to so serious an obstruction as occurred in these cases, unless there co-existed defective dilatation of the cervico-uterine canal." This view has not been displaced by any more recent observations, and in my own practice I have acted on it with advantage by dilating the cervical canal and curetting the endometrium in many instances of this kind.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

My Personal Experiences in Equatorial Africa as Medical Officer of the Emin Pasha Relief Expedition. By THOMAS HEAZLE PARKE, Hon. D. C. L. (Durh.); Hon. Fellow, Royal College of Surgeons, Ireland; Fellow Royal Scottish Geographical Society; Hon. Member of the Geographical Societies of Belgium and Antwerp; Corresponding Member of the Tyneside Geographical Society; Hon. Associate of the Order of the Hospital of St. John of Jerusalem, &c., &c.; Army Medical Staff. With Maps and numerous Illustrations. London: Sampson Low, Marston, & Company, Limited. 1891. 8vo. Pp. 526.

WE have read this book from cover to cover, and the impressions left upon our mind are that never was there a more Quixotic enterprise undertaken than the "Emin Pasha Relief Expedition;" never was there a more worthless object of national solicitude than the easy-going, weak-minded, vacillating Emin Pasha in question; and never was there a more conspicuous example of British pluck and endurance than that shown by the officers who took part in the expedition, including the author of the work before us, of whom the profession of medicine may well be proud.

"To my parents, many of whose most anxious hours have been associated with the interior of the Dark Continent, I now dedicate this diary, kept during my wanderings in its mazes," so runs Dr Parke's dedication of his book, fitly expressing the filial love and duty of a high-minded, chivalrous Irish gentleman.

The work, which is splendidly brought out by the well-known publishing firm of Messrs. Sampson Low, Marston & Company, of St. Dunstan's House, Fetter-lane, Fleet-street, London, E.C., contains the journal which Dr. Parke kept in his African note-books during the period of his connection with the Emin Pasha Relief Expedition—namely, from January 28, 1887, to January 16, 1890—as nearly as possible three years. And what a record it is!—of wanderings on foot through dense African forests, dism swamps, and burning prairies, for 5,000 miles; of lengthen periods of starvation; of battle and ambush; of still more deadly struggles against disease and death. To us, as we read this book, the wonder is that even one of its many heroes should have survived to tell the tale of wanderings with which the Odyssey cannot compare.

To a large extent, this work is supplementary to Mr. Stanley's "Darkest Africa." Like it, indeed, its pages contain an account of the entire course of the expedition.

But, besides this, much medical and scientific lore is enshrined in its pages, and for the first time we read of the unparalleled sufferings of Captain Nelson and Dr. Parke at the Arab village of Ipoto, where they were maltreated by the Manyuema, or "Ivory Hunters," during a stay of rather more than three months (from October 18, 1887—St. Luke's Day—to January 25, 1888). Several chapters also are devoted to a description of life at Fort Bodo, where Lieutenant Stairs, Captain Nelson, R.N., and Surgeon Parke encamped from June 8, 1888, to December 20, 1888, while Mr. Stanley returned to Yambuya in search of the ill-fated rear column, which had been left behind in the entrenched camp at that place, under the command of Major Barttelot and Mr. Jameson. Our readers will remember the tragical end of both hese officers. Barttelot was shot on the 19th of June, 1888, at Banalya, by a chief, for interfering with his wife, who was singing t 5 a.m. Jameson died at Bangala on August 17, 1888, after uffering for eight days from a hæmorrhagic fever. After these atastrophes Mr. Bonny, who had joined the rear column on ugust 14, 1887, assumed command until he was relieved by Mr. tanley.

Dr. Parke pays the following tribute to the memories of Barttelot d Jameson:—

> "My ill-fated friend, Major Barttelot, who was the direct agent of my troduction to the Expedition, was one of my brightest and pleasantest mpanions during the early months of its course. Although possessed a rather ungovernable temper, he was always a very jolly comrade, en not depressed or irritated by the effects of sickness or worry; and e only thing which tended to neutralise his usefulness in the post igned to him by Mr. Stanley was his pronounced antipathy to the ck man. Had he been more fortunate in his choice, and not joined r Expedition, his energy and undoubted bravery would probably have ured for him a brilliant soldierly career. The only other white officer o lost his life on the Expedition, Mr. Jameson, was always quiet, most

gentle, cheerful, and amiable to a degree. He was continually referring in the most affectionate terms to his home ties, and saying to each of us what a pleasant time we would have in his villa on the Thames, when the trials and troubles of the rescue of Emin Pasha were all well over. I entirely disbelieve that James Sligo Jameson was capable of any act of deliberate cruelty. Although his own letter is compromising, yet its candour is significant. It is a maxim to speak only well of the dead, and to leave untouched all that is unpleasant concerning them; but of Jameson I never knew but good." (Pages 509, 510).

A characteristic feature in the book is an occasional dissertation on some scientific or medical topic. For example, we have, in Chapter IX., a study of bacteriology, and subsequently less elaborate treatises on various methods of preparing castor oil, massage, entozoa, including guinea-worms; African fever, wounds, a report on the arrow-poison of the pigmies, water supply, analysis of the water of the "Salt Lake" at Katwé, by Sir Charles A. Cameron, of Dublin; hæmaturic fever, and gangrenous ulcers. Katwé is a settlement on the Muta Nzigé Lake (Albert Edward Nyanza), and the Salt Lake of Mkiyo is situated a few hundred yards from its western margin. This curious lake is only a few feet in depth. It does not possess any effluent stream—consequently its waters are extremely rich in saline matter. From the bottom of the lake great numbers of pinkish crystalline salt-slabs are taken, and bartered throughout many surrounding countries. The water of the lake itself has a pink tint throughout. It is pure brine, of a much higher specific gravity (1,274 compared with water 1,000, and Dead Sea water, 1,170 or thereabouts) than sea-water. The margin of the lake is strewn with dead butterflies and animals which came to drink, and drank and died.

Within the limits of a brief review, we can notice but a few of the many interesting points in this book. And first, our hero's promptness and decision of character are stereotyped in his telegraphic reply to Mr. Stanley asking whether he would join the Emin Pasha Relief Expedition—"Certainly. Coming to Cairo to-night." Stanley's telegram reached Parke when the latter was dining with a party at the Khedivial Club, Alexandria, the hour being 9 45 p.m. The same night he left for Cairo, having previously transferred the responsibilities of the Alexandrian Fox Hunt, of which he had been elected "Master" in 1886. Parke had heard of the intended expedition from Major Barttelot a few days before, and on inquiring of him who Emin was, Barttelot replied that he was "some chap who wanted to get out of Africa, and couldn't." It would have been nearer the truth to have said, "some chap whom they wanted to get out of Africa, but he wouldn't."

On the voyage from Aden to Cape Town, with 700 souls on board, a case of confluent smallpox occurred the day after the steamer left Aden. Parke acted with characteristic promptness, had the patient immediately removed to one of the boats swung above the bulwarks, where he was perfectly isolated, and vaccinated all the Europeans and other members of the expedition—excepting one European, who was an anti-vaccinationist (his name is not given). No case after the original one developed pronounced symptoms of smallpox—surely, a wonderful result under the circumstances.

At page 208, Dr. Parke describes the gangrenous ulcers which caused so much suffering to the members of the expedition while on the march through the African forest:—

> "When the resistance of the tissues," he writes, "has been reduced to a certain (low) level, every slight abrasion of the skin refuses to heal—especially if on the legs—and becomes the centre of a spreading sore."

Having alluded to the fact that the worst of these ulcers were distinctly traceable to direct infection and irritation by the bites of flies, he goes on to say—

> "A bulla is sometimes seen to form on the infected spot, which—in the vast majority of the worst cases—is below the knee; this is filled with a dark-red serous fluid, and soon breaks, leaving a ragged sloughy surface exposed. From this starting-point, the sloughing process, in the cases of those individuals who have previously been greatly reduced by starvation, spreads with appalling rapidity, and destroys the various tissues in the unsparing way that hospital gangrene is known to do. The edges are livid in colour, and horribly ragged in outline and texture; the tissues beyond them are infiltrated, and 'boggy' to the touch. The subcutaneous and muscular tissues yield most readily; so that, after a time, shreds of tendon and edges of aponeurotic sheaths are seen lying across the floor and sides of the ulcer, and sometimes trail the ground; the nerves and vessels are treated with greater respect for some time, so that they are completely dissected out, and may be identified in their proper anatomical positions; but by-and-bye they, in their turn, also yield. The ensheathing membrane of the bones is afterwards laid bare, and shares in the necrobiotic change; and, as an inevitable result, the superficial layers of osseous tissue perish, and undergo exfoliation. . .

The loss of vascularity occasioned by the coagulation of the blood in the surrounding vessels, gave the whole of the eroded surface an ashen-grey appearance, as if all colouring matter had been removed from the tissues by a very crude process of bleaching. But high above all the signs and symptoms of the ulcer of the Emin Pasha Relief Expedition, towers that characteristic smell which is invariably present—not only to the sufferers and their medical attendant, but to every individual member of our force, and to every white officer, whether in camp or on the march—one, the memory of which will, I think, always remain with me on this side of eternity!"

This passage illustrates one of the difficulties Dr. Parke had to contend with in writing a popular work into which medical practice was bound to intrude. On the whole, we think he has fairly acquitted himself while treading upon somewhat delicate ground. He is not quite so happy when on two occasions he indulges in a very laudatory and deserved commendation of the medical preparations of a well-known and justly renowned firm of pharmaceutical chemists. Surely one expression of approval would have sufficed even in a purely medical work—a footnote would have sufficed in the work before us.

At page 254 a novel condiment is described. It is called *nouesoir*, and consists of ants pounded and cooked. The most palatable variety is that prepared from white ants, which is eaten as a *kitawayo* (condiment), tasting somewhat like caviare.

On more than one occasion poor Parke suffered from a most dangerous form of malarial poisoning—bilious remittent hæmaturic fever. He mentions (at pages 288 and 289) that, whereas large doses of quinine—up to 90 grains daily—failed to check the fever (104° F.), it readily yielded to arsenic. "My fever," he writes under date Oct. 27, 1888, "is diminishing. I take six tabloids of arsenic daily ($\frac{1}{30}$ of a grain in each), and my temperature has not gone above 100° F. since I took to this medicine." Dr. Parke is generally accurate in his descriptions of disease, but we observe a decided slip in his account of a case of Bell's palsy, at page 454, in which he says "*the ptosis is well-marked.*" In connection with the same case, he states that the patient had slight aphasia, a sequela of very high fever, from which he had also been suffering. He was one of the strongest men in the expedition, and Dr. Parke suspected that he got an attack of sunstroke—superimposed on his fever. The symptoms of sunstroke on the presence of which Parke lays stress are—extremely high temperature, paralysis of the limbs, and slight aphasia. He has little doubt that the remarkable immunity of the members of the expedition from sunstroke should be attributed in part to the fact that the heads of the carriers were always protected by their loads during the march. "But," he adds, "I do not by any means think that their safety was altogether due to this. As a matter of fact, I have seen more cases of sunstroke in one day at Aldershot, than I have ever met with in the whole course of my seven years' African experience, including the Egyptian war of 1882, and the Nile campaign of 1884–85—although in the latter I went as far south as Metammeh—within sixty miles or so of Khartoum. *Drink* is certainly the most powerful predisposing cause of the development of the symptoms of sunstroke." (Pages 455 and 456).

One of the most important chapters in the book is the sixteenth, which contains a full account of the deadly arrow-poison of the pigmies. With the aid of Mr. E. M. Holmes, F.L.S., the curator of the museum of the "Pharmaceutical Society of Great Britain," Parke was able to present an interesting report on the arrow-poison to that society, on Wednesday, April 8, 1891. From the examination made by Mr. Holmes of specimens of bark, large green leaves, a thorny creeper, a green stem and leaf, and seeds, all brought home by Surgeon Parke, it is obvious that in this arrow-poison the two chief active ingredients are erythrophlœin and strychnin. When *Erythrophlœum* is in excess in the poison, muscular relaxation is the prominent symptom; when *Strychnos* orms the principal ingredient, tetanic symptoms are present. Of ll the men wounded by poisoned arrows at the action of Avisibba nly one survived—viz., Lieut. Stairs, and his recovery was robably due to the fact that the poison was immediately sucked rom the wound. The importance, in the interests of humanity, of scertaining the composition of the poison and of learning the ature of the antidote used by the pigmies, accordingly admits of o doubt. A white powder used as an antidote was examined by ir Charles Cameron, of Dublin, and proved to consist simply of ood ashes. It is "an alkaline material containing carbonate of otassium, chloride (? chlorate) of potassium, and carbonate and hosphate of calcium. It is, of course, a caustic and antacid."

As the action of both erythrophlœin and strychnin is known, r. Holmes points out that it is by no means impossible that a hysiological antidote could be provided for these poisons.

The closing episodes of Parke's adventurous story are told in quite a dramatic style. "Having crossed the African continent from west to east, we arrived at Bagamoyo" [the port on the mainland opposite to Zanzibar] "on the 4th of December, 1889. The sight of the broad expanse of ocean called forth shrieks of joy from our impulsive Zanzibaris, which proved sufficiently infectious to be taken up even by the stolid, lazy, good-for-nothing Egyptians. My own eyes were not in good enough condition to enjoy the sight so much as I could have wished, but I felt, perhaps, nearly as much as any. The bitterness of death was past, our slow and weary pilgrimage had drawn to a close!"

This passage reminds us of Xenophon's description of the enthusiasm with which the first view of the Black Sea inspired the retreating troops of the expedition of Cyrus:—"Καὶ τάχα δὴ ἀκούουσι βοώντων τῶν στρατιωτῶν, θάλαττα, θάλαττα, καὶ παρεγγυώντων. Ἔνθα δὴ ἔθεον ἅπαντες καὶ οἱ ὀπισθοφύλακες, καὶ τὰ ὑποζύγια ἠλαύνετο καὶ οἱ ἵπποι. Ἐπεὶ δὲ ἀφίκοντο πάντες ἐπὶ τὸ ἄκρον, ἐνταῦθα δὴ περιέβαλλον ἀλλήλους, καὶ στρατηγοὺς, καὶ λοχαγοὺς δακρύοντες. Καὶ ἐξαπίνης, ὅτου δὴ παρεγγυήσαντος, οἱ στρατιῶται φέρουσι λίθους καὶ ποιοῦσι κολωνὸν μέγαν."—(Xenophon's *Anabasis of Cyrus*, Book IV., chapter 7). "And very soon they hear the soldiers shouting out 'The Sea! The Sea!' and passing the word on to the rest to come on. Thereupon they all, even the rearguard, began to run, and the beasts of burden and the horses were driven on. But when they had all reached the summit, then they burst into tears and embraced one another—generals and captains alike. And on a sudden, at the suggestion of some one or other, the soldiers pile up a great heap of stones."

But Parke's troubles were not over when he reached the seaport, Bagamoyo. On the very evening of the arrival there Emin Pasha met with an accident which nearly cost him his life and certainly predisposed Parke himself to an illness which placed his life too in imminent danger. Let us tell the story in Parke's own words:—

"The local magnates, vice-consuls, &c. (English, Germans, and Italians), welcomed us, and the Germans entertained us in the evening with the object of doing honour to the long lost Pasha and the hero of his rescue. A brilliant congratulatory speech was made by Major Wissman, to which Mr. Stanley replied; and Emin Pasha expressed his grateful appreciation of what had been done for him by Mr. Stanley and ourselves, as the representatives of British philanthropy, in an eloquent and highly-finished discourse. All went merry as a marriage bell

After this speech he walked round to the back of my chair, full of spirits, spoke something in my ear, and strolled, evidently in an absent and contemplative mood, through a doorway towards the window of an adjoining room. He had occupied one-story dwellings only, for a period of fourteen years: it was not a time for sudden inquiry, or suspicion of novelty; and, being excessively short-sighted, he simply walked through and was precipitated to the ground, a distance of about eighteen or twenty feet. . . . The fall produced immediate unconsciousness. A couple of his ribs were fractured. His eyes were bruised, and the lids very much swollen, as he had fallen partly on his face; and there was extensive subconjunctival, as well as subcutaneous ecchymosis. Blood oozed from both ears; so that, although I would fain think otherwise, there was much to say in favour of the diagnosis of extensive fracture of the base of the skull. He remained perfectly comatose for a period of nearly five hours, and the first word which he uttered on partial recovery of the power of articulation, was 'Parke.'"

There can be no doubt from the history of the case that Emin Pasha owed his life on this occasion to the skill and care of his medical attendants, Dr. Brehme, of the German Hospital at Bagamoyo, and Surgeon Parke.

After three weeks' attendance on Emin Pasha, Parke was himself suddenly struck down with an attack of malarial (hæmaturic) fever, which rapidly assumed an extremely malignant type. He was conveyed to the French Hospital at Zanzibar, where he was placed under the care of Dr. Charlesworth. So ill was he that Dr. Charlesworth lost all hopes of his recovery, and on one night, when the patient was at the worst, he summoned Mr. Stanley and his brother-officers of the expedition to see him breathe his last. Stanley, with characteristic authority, after being in the sick-room or a couple of minutes, went over to the window and opened it. Prostrate as he was, Parke was conscious, and felt, he says, deeply grateful to Stanley for his action on that occasion. During this errible illness he practically lived on iced champagne, and his ense of taste was never so completely benumbed as to prevent him ppreciating this beverage. "After three long years of indulgence the sipping of stagnant, fetid, tepid, typho-malarial African ater, the promotion to the enjoyment of such nectar as this was most worth the illness which confined me to its use."

When his leader and companions were leaving Zanzibar for airo, the convalescent, poorly though he still was, would not be ft behind, and so finally the whole party—with the exception of the vacillating Emin Pasha—arrived at Cairo on the 16th of January, 1890. On the 7th of the following April, Stanley and Parke started from Cairo for Alexandria, where they embarked for Brindisi on their homeward journey on the evening of the same day.

In concluding this notice, we have a warrantable pride in reflecting that it was an Irishman—an Irish physician and surgeon—who through three eventful years played a hero's part, and by his undaunted courage, intrepidity, humanity, and skill, shed a fresh lustre upon the medical profession.

J. W. MOORE.

Leprosy. By GEORGE THIN, M.D. London: Percival & Co. 1891. Pp. 280.

DR. THIN has published this excellent work at a most opportune time. The interest taken in Leprosy has considerably increased of late years, and a very large amount of work in connection with this subject has been recorded in various journals and societies, but no complete work treating of the subject as a whole has appeared for many years. Dr. Thin now gives us a clear and full account of leprosy from the earliest historic ages to the present time, and we warmly congratulate him on having produced a standard English text-book on such an important subject.

The history of the disease is fully described. The Mosaic references to leprosy are discussed. Dr. Thin considers that the Biblical "leprosy" was the same disease that we now know by that name, but seems to think that many cases of other skin diseases—*e.g.*, leucoderma—were confounded with it by the Jews. We may remark, in passing, that Dr. Thin believes that Job's disease was leprosy. The author shows how prevalent this disease was all over Europe during the middle ages, and how rapidly it diminished and disappeared in many of the countries where it had formerly been most abundant, this diminution being simultaneous with the adoption of strict measures for the isolation of lepers from the general population.

The present geographical distribution of leprosy is described; and a most instructive map of the world is inserted as frontispiece to the book, in which leprous districts are coloured red, the degree of colour representing the intensity of the disease in each locality.

After a full description of the various varieties of leprosy, Dr. Thin discusses its pathology. He holds most fully the bacillary origin of the disease. "The pathology of leprosy simply expresses the kind and amount of destruction produced by the direct action of the bacilli in certain parts of the body, more particularly in the cutis and in the mucous membranes, and on the tropho-neurotic changes consequent on the destruction of nerves by the special elective affinity of this organism for nerve-trunks. To these changes may probably be added, in the second rank, certain secondary processes of degeneration produced by the wasting effects of the disease in its later stages, and certain erythemas, probably produced by the action on blood-vessels of a poison set free by the growth of the bacillus."

With regard to the position of the bacilli in the living tissue, Dr. Thin is convinced they are enclosed in cells—in fact, he goes so far as to say that there is no evidence that the bacilli can live and multiply except in cells. He thus differs completely from Unna, who holds that the bacilli live, not in cells, but free in the tissues, and believes that the appearance of cells is due to the fact that the bacilli live in colonies and exude a glia.

These bacilli exist in enormous numbers in the affected skin. "In well-developed cases the corium may be rightly considered as being almost composed of masses of bacilli. When we consider the extent to which the integument is sometimes involved in tubercular leprosy, it is almost appalling to think how much of the actual specific weight of the individual must be due to the parasites he carries about with him."

As regards the mode of propagation of the disease, Dr. Thin believes it is contagious, and always spread from person to person. The fact of the bacillus suggests, though it does not prove, contagion. Leprosy has always spread in connection with previously existing foci. Wherever lepers have gone, there leprosy has developed, unaffected by differences of climate, food, soil, or habits. Many cases are on record in which a healthy person in association with lepers became leprous. If this occurs in a leprous country not much is proved, because the person might be said to have caught leprosy in some other way than by contagion; but if such ccurrences are recorded in non-leprous countries, they go far to prove that leprosy is contagious; and several such cases have been ecorded. Dr. Thin lays much stress on Dr. Hawtrey Benson's ase of a man who contracted leprosy in the West Indies and then eturned to Dublin, where he lived in close association with his rother. After some time this brother, who had never been in a eprous country, contracted the disease. Many other similar cases are quoted, but none so convincing as this one. In the heredity of leprosy Dr. Thin entirely disbelieves.

There is an important chapter on the isolation of lepers. "The tendency of mankind in all ages and in all countries appears to have been to segregate lepers." In the middle ages lepers were most rigidly isolated. We read how the Church considered the leper as dead, and how the burial service was performed over him on the day when he was confined in a lazar house. The thoroughness of isolation gradually lessened until recent years, when again more stringent regulations against leprosy have been adopted. Acts for the compulsory isolation of lepers have within the past ten years been passed in Norway, Australia, and elsewhere. Dr. Thin believes that judicious and careful isolation will probably succeed in checking the disease in a country.

There are other good chapters on treatment, on diagnosis—an important subject even in the British Islands, for occasionally persons, home from leprous countries, affected themselves with leprosy, but ignorant of their disease, require to have their state diagnosticated—on prophylaxis, and on other subjects, which do not call for extended notice here.

The work is illustrated by three photographs—one of the bacilli and the others of tubercular leprosy and of nerve leprosy. Our only fault with the book is that there are not enough of these illustrations. Photographs or plates illustrating the various manifestations and varieties of the disease would have been a valuable addition to the work. In the case of a rare disease, it is always much easier to get an idea of its appearances from a plate than from a verbal description. We hope that the author may see his way more fully to illustrate his next edition.

We cannot conclude this review without again congratulating Dr. Thin on the excellence of the work he has produced.

On Harelip and Cleft Palate. By WILLIAM ROSE, M.B., B.S
Lond., F.R.C.S. London: H. K. Lewis. 1891. Pp. 158.

SEVENTY pages of this book are devoted to a study of th development, and an account of the varieties, of harelip an cleft palate, with chapters on the anatomy and physiology the normal and abnormal palate and lip. These pages ar interesting and suggestive, and they well repay perusal. Th remaining pages deal with the operative treatment of the affe tions noted, and end with short chapters on obturators, syphilitic affections of the palate, and rectal anæsthesia.

The chapters on operative treatment afford ample proof of the writer's wide experience in this department of surgery. The monograph is exhaustive without being prolix, and one can see at a glance that Mr. Rose is thoroughly familiar with every procedure he describes and recommends, and that the minutiæ on which the successful performance of palatine operations depend are distinctly set forth.

The work is a fitting outcome of the teaching of the late Sir W. Fergusson, to whom the author is indebted for much of his experience, having acted as his assistant for many years; and we are not saying too much in concluding with the remark, that every surgeon interested in this subject should read the monograph under review.

Massage and the Swedish Movements: their application to various Diseases of the Body. By KURRE W. OSTROM, from the Royal University of Upsala, Sweden; Instructor in Massage and Swedish Movements in the Philadelphia Polyclinic, &c. Second Edition. London: H. K. Lewis. 1892. Pp. 143.

IN this little book we have a description of various movements nd manipulations, fully illustrated by 87 diagrams. The descripions are fairly clear, and the diagrams instructive. They will robably be found useful by those who are studying the art of assage.

At the same time, we think that a very unnecessary amount of omplexity has been given to the whole subject by too great muliplication of details, and by attaching undue importance to trifles; nd also by excessive nomenclature, especially in the section on wedish movements. Thus we have the side-flex-standing, the efore-bent-standing, and the stoop-curve-standing positions; we ave also the sit-lying, and the crook-half-lying positions. We think e matter would be made much more intelligible if, instead of olated descriptions of every single manœuvre and position, a ore general account was given of the principles on which the hole method is based, and from which the individual positions, c., could be derived. This is the chief fault we see in this rk—viz., excess of detail and deficiency of general principles.

The last part of the work gives a list of most of the ordinary diseases with the manipulations most suitable for each.

Although we believe in massage, we cannot go quite as far in our faith as Dr. Ostrom does. We cannot, for example, see how the rectum can be acted on by turning the patient on his face and performing firm beating of the sacrum in circles (p. 38); neither do we believe in massage of the spleen when normal in size.

A Practical Treatise on Diseases of the Skin. By H. G. PIFFARD, M.D., assisted by R. M. FULLER, M.D. London: H. K. Lewis, 1891.

DR. PIFFARD is well known as an active worker in Dermatology, and he has freely contributed to the literature of his favourite subject. He has now brought out a splendid quarto volume which is essentially a photographic Atlas of Diseases of the Skin with accompanying letterpress.

Of the text little need be said, for the author expressly limits himself to presenting the subject in a practical manner and in few words. Although two or three microphotographs of morbid histology are inserted, all other reference to the minute pathology of the skin is intentionally omitted, on the ground that this branch is still in such an undeveloped condition.

In the sections upon treatment we may note a few points.

In the local treatment of eczema Dr. Piffard thinks highly of "black wash" double the strength of the officinal preparation. "Of still greater value during the first and second stages is the solution of the peroxide of hydrogen. The commercial article usually contains 12 volumes *(sic!)* of the peroxide, and is too strong to apply in many cases of eczema, and may require dilution with one or two parts of water or even more. The effect of this solution in many cases appears almost magical, reducing the purulent exudation, and hastening the formation of a new epidermis."

For pediculi capitis he knows of nothing more effective for the destruction of these pests than "drowning them out with ordinary kerosene."

In syphilitic necrosis of bones he considers that gold "unquestionably hastens the separation of the sequestrum by promptly determining the line of demarcation between the healthy and the diseased tissues. A grain of the chloride of gold, or tw grains of the chloride of gold and sodium, may be dissolved in an ounce of water, and 5–10 drops be given once or twice a day."

For eczema of the anus he recommends *graphite* ointment—a novel recommendation, and intelligible only as a protective.

The illustrations embrace 50 full-page plates and 33 smaller illustrations. The large photographs were made by the author with the aid of artificial light, which his experience leads him to prefer for this purpose to ordinary daylight. The negatives for the smaller illustrations were in part executed by the author, and in part by a professional photographer. As examples of photographic art we may at once say that many of the plates are of decided excellence, and some of them faithfully recall the clinical features of the disease they are intended to portray. But we do not consider that by photography alone, especially when uncoloured, a really useful and practical Atlas of Diseases of the Skin can be produced.

Comparatively few affections—*e.g.*, alopecia areata, leucoderma, and ichthyosis, lend themselves readily to this mode of illustration. Most other skin affections demand the aid of colour, and of careful colouring, if we wish to obtain pictures of much service for reference or comparison. Mere accuracy of outline alone is far from sufficient. The smaller plates are all named, whereas the large plates are only numbered, the reference numbers being appended to each descriptive article.

The Medical Annual and Practitioner's Index. 1892. Tenth Year. Bristol: John Wright & Co. 1892. 8vo. Pp. 784.

DURING the past ten years this "hardy Annual" has been steadily winning its way into public favour, and now it commands a circulation of not less than 10,000 copies a year. Printed in clear type on excellent paper, the subject matter of the work is contributed by the leaders of medical and surgical thought and practice in their several departments. Neither trouble nor expense has been spared in making the undertaking a success, and we know of no other year-book which contains such varied and valuable information.

In previous notices we have sufficiently indicated the plan and scope of this work. In the volume before us, the articles which are likely to attract most attention are those by Dr. M.

Armand Ruffer on "Recent Advances in Bacteriology;" Mr. Andrew Pringle on "Medical Photography;" Mr. Wm. Thorburn on "The Surgery of the Spinal Cord;" Dr. Colcott Fox, a series of short articles on different "Skin Diseases," and Dr. R. Shingleton Smith, on "Phthisis."

We should not omit to mention that the "Annual" is beautifully illustrated with coloured plates, photographs, and numerous woodcuts and engravings. It also contains the usual collateral information relative to medical institutions, publications, and societies.

The Year Book of Treatment for 1892: *a Critical Review for Practitioners of Medicine and Surgery.* Cassell & Company, Limited: London, Paris, and Melbourne. 1882.

THE present volume of this popular Year Book is slightly larger than its predecessor of 1891; and we also notice that Dr. M. Handfield Jones and Mr. J. Ernest Lane are added to the list of contributors.

For the first time the Annual contains a "Selected List of New Books, new Editions, and Translations."

We would suggest that Spanish works be added to the list, and that American publications be separated from British ones.

The changes we indicate could, with the aid of the "Index Medicus," be easily carried out.

These suggestions are not made in the spirit of fault-finding, but are rather promoted by the desire to still further add to the value of an Annual that has deservedly become a favourite with the medical profession, and is what it purports to be—a concise epitome of the chief articles of the year.

The Middlesex Hospital: Reports of the Medical, Surgical, and Pathological Registrars for the Year 1890. London: H. K. Lewis. 1891. Pp. 333.

A HOSPITAL Report for 1890 belongs to ancient history at this time of day; and we do not propose to notice the volume at any length. It is a carefully compiled record of an institution in which, during the year, 3,356 patients were treated, with a mortality of little over 10 per cent. Separate Reports are, as usual, contributed by the Medical, Surgical, and Pathological

Registrars. From the first of these we learn that the 1890 epidemic of enteric fever was a mild one, only 19 cases being treated in this hospital. The death-rate was 10·5 per cent. Most cases were admitted in October and November. Three of the patients were over 40 years of age. "There was a history of exposure to sewer-gas in 6 cases." Thirty-eight cases of influenza were admitted—most of them in January, none after April; 1,500 cases were treated as out-patients. Only one in-patient died—of "severe bronchitis, prostration, and cyanosis." A summary and details of cases from the gynæcological ward is appended. There were 35 operations, of which 5 were fatal. Thirty-four operations of similar character were performed in the surgical wards, with 9 deaths; besides 5 cases (with one death) in which laparotomy was performed without removal of uterus or appendages.

Consumption: How to Prevent it, and How to Live with it. By N. S. DAVIS, Junr., A.M., M.D.; Professor of Principles and Practice of Medicine, Chicago Medical College, &c. Philadelphia and London: F. A. Davis. 1891. Pp. 143.

DR. DAVIS found it useful to give to his patients who were threatened or affected with consumption, a printed series of hygienic rules which they could study and digest at their leisure, and by which they could regulate their conduct and mode of life. From this code of rules the present volume has grown. It is therefore written for the public, and is intended to supplement the verbal directions of the doctor. It treats briefly of the nature of consumption, and of the means of preventing it—fresh air, out-door work, destruction of tuberculous sputum, &c. Dr. Davis then discusses at considerable length the effects which different climates and altitudes produce upon consumptives. This section is written primarily from an American point of view, but the best known European health-resorts are also mentioned. The description of American climates is good, and may be found useful by European physicians who may think of recommending a trial of Colorado or some other district in the United States. The rest of the book is taken up with such subjects as exercise, clothing, food, and stimulants. There is a short chapter on the general principles of medicinal treatment.

We are much pleased with the tone and spirit of this little book; it is singularly free from fads and nonsense. The advice given is not too dogmatic; the author clearly recognises the fact that the same method of treatment will not suit every case, and that there is no specific for this disease. There is no attempt here to supersede the physician in charge of any case, the object rather is to educate the patient sufficiently to enable him to carry out his doctor's directions with more intelligence than heretofore.

We believe that this book will be found useful by many intelligent consumptives.

Inherited Consumption and its Remedial Management. By WILLIAM DALE, M.D. Lond.; M.R.C.P. Edin., &c. London: H. K. Lewis. 1891. Pp. 37.

THE title of this excellent little book does not quite convey a full enough idea of its scope. It really consists of a number of hints and directions as to the bringing up of children, whether strong or delicate, but, of course, most applicable to the delicate. It is intended mainly for the public—for the mothers and relatives of children—and is written perfectly clearly and distinctly. It contains directions as to diet, clothing, education, exercise, and other equally important topics.

We believe that the reading of this little book by mothers and those who have the care of children would prove to be a real advantage to the health of those under their charge.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Volume XII. REGER-SHUTTLEWORTH. Washington: Government Printing Office. 1891. Quarto. Pp. 1,004.

UNDER date April 30, 1891, Dr. John S. Billings, Surgeon, United States Army, presents to General Charles Sutherland, Surgeon-General, United States Army, the twelfth volume of the magnificent Index-Catalogue of the Library of the Surgeon-General's Office.

This volume contains 20,251 author titles, representing 8,0 volumes and 18,090 pamphlets. It also includes 6,603 subject-titles of separate books and pamphlets and 18,956 titles of articles in periodicals. It carries us from "Reger" to "Shuttleworth."

So far as published up to the present, the Index-Catalogue includes 137,578 author-titles, representing 66,855 volumes and 120,000 pamphlets, as well as 128,284 subject-titles of separate books and pamphlets, and 393,808 titles of articles in journals and periodicals.

These astonishing figures will show what an important work of reference the Index-Catalogue already is, even in its unfinished state.

The Watering Places of the Vosges. By HENRY W. WOLFF. London: Longmans, Green, & Co. 1891. 8vo. Pp. 155.

IN a pleasant, chatty, popular style, the author of this book gives in its pages an impartial and instructive account of the watering places of the Vosges—Plombières, Contrexéville, Vittel, Martigny-les-Bains, Bourbonne-les-Bains, Luxeuil, Bains-les-Bains, Bussang, and the small spas of Alsace which lie on the German side—or as the French call it, the "Alsatian" side—of the Vosges.

The history of the *renaissance* of Plombières under the fostering care of the Emperor Napoleon III. is well told in the second chapter. It would probably have fared better with that hapless monarch, both personally and politically, had he never taken the "cure" at what Dr. Burney Yeo has styled "the Queen of watering places of the Vosges." The Contrexéville doctors at all events, according to Mr. Wolff, firmly maintain that had Napoleon III. gone to Contrexéville instead of Plombières he would almost certainly have been cured, and then there might have been no 1870! There was, unfortunately, no suitable residence for him at Contrexéville. The solvent power exercised on uric acid and urate calculi by the weakly alkaline "Source Pavillon" of Contrexéville is well known. Sir Henry Thompson held that the stone, which eventually proved fatal to the French Emperor, had attained its unmanageable size through the deposition upon a kernal of urate not larger than a coffee-berry, of successive enclosing shells of alkaline salts derived from the strongly mineralised waters of Vichy—an accident which never happens with the weak waters of Contrexéville.

Our author's accuracy and honesty of description are exemplified in his account of the last-named watering place, now so popular among our own countrymen. "Apart from its waters," he says, "Contrexéville has but little to offer to visitors worth travelling for;" and again—"Enough has been said to show that, *although by no* *means a violently beautiful place* (!), still Contrexéville has enough within its boundaries and surroundings to make a short stay tolerable." This is quite true—the Vsoges mountains are miles away, and the village itself, set in the middle of a far stretching plain, is thoroughly uninteresting. "But the waters are singularly efficacious, and their efficacy will, like charity, cover a multitude of shortcomings."

Vittel, Martigny, Bourbonne-les-Bains, and Luxeuil are not so well known to English health-seekers as Plombières and Contrexéville. Hence Mr. Wolff's pleasant description of these watering places will be all the more acceptable. The "after-cure" at Bussang, a refreshing *reconstituant* spring, perched high in the Vosges mountains, is described in Chapter IX. The water contains small quantities of arseniate of iron and about 2½ parts per 1,000 of free carbonic acid. Hence it is at once tonic and refreshing, and serves as a table water throughout France.

There are some literary eccentricities in Mr. Wolff's book, as when he writes, "Another almost speciality are the *sources savonneuses*" (page 10); "Of course the 'foule' of Germans have disappeared" (page 29); "where once stood a Roman castrum. Another Roman castrum was very near Bourbonne, at Châtillon" (page 88). "The place is therefore get-atable" (page 125). These blemishes will not, however, detract from the value of what is really an excellent guide to the watering places of the Vosges. A route-map serves as a frontispiece to the book, but an enlarged topographical map of the Vosges district would much enhance the usefulness of the work.

Selected Monographs. Raynaud's Two Essays on Local Asphyxia. Klebs and Crudeli on the Nature of Malaria. Marchiafava and Celli on the Origin of Melanæmia. Neugebauer on Spondylolisthesis. London: New Sydenham Society. 1888.

THE essays selected for publication in this volume are of general and special interest. Probably the one that will attract the largest circle of readers is the first. It deals with a subject of considerable interest in itself, and one, moreover, which throws light upon some hitherto obscure chapters in pathology. The papers relating to local asphyxia (symmetrical gangrene) are three in number—(*a*) Dr. Raynaud's original thesis, which was published in 1862; (*b*) his later researches, published in the

Archives Générales de Médecine, 1874; (*c*) an appendix by the translator, Dr. T. Barlow, containing reference to the chief additions made by others to the knowledge of the subject subsequently to the publication of Raynaud's memoirs.

The essays by Klebs and Tommasi-Crudeli, and by Marchiafava and Celli, deal with special pathological points of considerable interest. The concluding monograph, by Neugebauer, upon spondyl-olisthesis, illustrates a variety of pelvic deformity which previously was ill understood.

A Manual of Autopsies Designed for the Use of Hospitals for the Insane and other Public Institutions. By J. W. BLACKBURN, M.D.; Pathologist to the Government Hospital for the Insane, Washington, D. C. Illustrated. P. Blakiston, Son & Co., Philadelphia. 1892. Pp. 84.

THIS book was written primarily for the use of the medical officers of lunatic asylums. Its object is to promote the adoption of a uniform system of reporting autopsies in these institutions, hence we find special attention is paid to the removal and examination of the brain. As well as this, however, a concise but clear account is given of the mode of examining the thoracic and abdominal cavities and their contents.

With regard to the dissection of the brain, the sections recommended by M. Pitrés are adopted with some slight modifications. These sections are vertical in direction, and are made at right angles to the long axis of the brain—*i. e.*, in the plane of the coronal suture. These sections are six in number, and are made through definite regions of the brain. We have, ourselves, tried this method of dissecting a brain, but we must confess we prefer the long horizontal sections which expose at once a much greater surface of the brain.

There is a table giving the average weights of the various organs, expressed both in ounces and in grammes. In this table we notice one curious point. A drachm is taken as being equivalent to 1·77 grammes—a serious mistake.

There is a useful chapter on the best methods of hardening tissues for microscopical purposes.

The work is carefully and well written, and we can recommend it to the notice of all who make *post-mortem* examinations.

PART III.

SPECIAL REPORTS.

REPORT ON THE PROGRESS OF SURGERY.

By R. Glasgow Patteson, M.B., Univ. Dubl.; Fellow and Member of the Court of Examiners, R.C.S.I.; Surgeon to St. Vincent's Hospital.

SYNOPSIS.

I.—TREPHINING FOR THE RELIEF OF INTRA-CRANIAL PRESSURE.
II.—INTRA-CRANIAL NEURECTOMY OF FIFTH NERVE.
III.—TREPHINING FOR TRAUMATIC EPILEPSY.
IV.—LIGATURE AND EXCISION OF INTERNAL JUGULAR VEIN.
V.—ENUCLEATION IN THE TREATMENT OF GOITRE.
VI.—TREATMENT OF SUPPURATIVE CHOLECYSTITIS.
VII.—SURGICAL TREATMENT OF HEPATIC ABSCESS.
VIII.—INTERMITTENT HYDRONEPHROSIS.
IX.—SPINAL SURGERY: RECENT ADVANCES.
X.—OPERATIVE TREATMENT OF SPASMODIC TORTICOLLIS.
XI.—A NEW METHOD OF TENOTOMY.
XII.—TUBERCULOSIS OF THE URINARY BLADDER.
XIII.—TREATMENT OF TUBERCULOSIS OF BONES AND JOINTS.
XIV.—GASTROSTOMY.

The literature of surgery is one of such ever-changing and ever-widening nature that few months elapse without the addition of some new books or new editions which deserve more than a passing notice. Every new method of antisepsis or of surgical technique calls forth a host of miniature monographs and criticisms; so that with constant change and modification of its component parts the picture of surgical procedure is more kaleidoscopic in its nature than that of any other branch of medical science. And although every half year cannot be expected to bring forth some epoch-making advance in the theory or practice of our art, yet each month, as it passes by, leaves some new ideas either to be added to the storehouse of our knowledge, or relegated to the lumber-room of our disappointments. The last few months have been rendered notable by the appearance of several books which reflect in some degree the present lustre of British Surgery. Notably Mr. Frederick Treves' "Manual of Operative Surgery," a splendid work in two beautifully got up volumes, marks its present high position and forms an admirable epitome for every worker in this field. Mr. Greig Smith's well-known work on "Abdominal Surgery" we welcome in a fourth edition—a fact which is sufficient testimony to its value and to the estimation in which it is held. Further, Messrs. Ballance and Edmunds, in a volume which is a veritable *édition de luxe*, have published the results of their long experimental labours, and have produced a work on "Ligation in Continuity" which is without a rival in any language; and Mr. Bland Sutton, in his "Surgical Diseases of the Ovaries and Fallopian Tubes," has produced one of the most striking and suggestive works, from a pathological and clinical standpoint, that has as yet appeared in connection with this branch of surgery. Other works might be referred to, but space, not the want of merit, compels us to pass them over in silence.

I.—TREPHINING FOR THE RELIEF OF INTRA-CRANIAL PRESSURE.

Possibly no subject in cerebral—or indeed present-day—surgery is of more interest or of greater practical importance than this, to which attention is called by a paper of Dr. Philip Knapp in the *Journal of Nervous and Mental Diseases*, February, 1892. So long ago as 1888, as Dr. Knapp points out, at the Congress of American Physicians and Surgeons, Weir suggested "the propriety of trephining to relieve symptoms in cases where the new growth was inaccessible or where its seat could not be determined." But it remained for Mr. Victor Horsley to urge the advantage of such a procedure for the relief of *pressure* only; and the six cases which he brought forward at the International Congress at Berlin in 1890, in which trephining had been performed with this object alone in view, constitute the first contribution to a subject which is now attracting widespread attention. So that the credit of trephining with the *definite idea of relieving pressure and that alone* does rightly belong to Horsley and not to Weir, whose idea embraced the relief of other symptoms as well. Dr. Knapp admits that Horsley's six cases and his own, here recorded, are the only ones in which this was the primary object of the operation. Dr Knapp's case was that of a man, aged twenty-eight, who at the age of seventeen months suffered from an anterior cornual myelitis, which left permanent paralysis and atrophy of the left leg. Up to the time at which he came under observation his health had been fairly good; for some years he had suffered from indigestion and constipation, with occasional dull headache; but about six months previously the headache increased in frequency, became referred to the right occipital region and much more severe, at times compelling him to lie up. At about the same time he began to suffer from dimness of vision and diplopia; the pupils reacted normally; the fields of vision and the movements of the globe were unimpaired; but there was pronounced papillitis in both eyes, more striking and advanced in the right. His symptoms now were as follows:—He had one or two attacks in which he cried out, frothed at the mouth, and fell, but the onset was never seen. The headache became more severe, being mainly referred to the occiput, but at times extending to the temporal and frontal regions. He suffered from attacks of nausea and vomiting, "after which the pain in the head became excruciating." The sense of smell had been for some time lost. The eyesight slowly failed until perception of light was lost—the left eye holding out longer than the right. There was distinct failure of hearing in the left ear. "The speech was somewhat thick and the articulation was not very distinct, but there was no more disturbance than is often noted with healthy people, no stumbling over syllables, no incorrect use of words, nor any difficulty in comprehending what was said." He had at times an urgent desire to urinate, but inability to accomplish the act for some time on attempting it. With the vision-failure his gait got unsteady, but *there was no staggering or incoordination.* The left leg and thigh were much wasted, the foot presenting a typical talipes equino-varus. Some time later it was noted that there was some weakness of the ocular muscles, and of the masseters, the other facial muscles appearing unaffected. "The pupils were dilated, equal, and reacted to convergence though not to light. Vision and smell were lost. Hearing in the left ear was much diminished." His symptoms continuing, and the muscular weakness increasing, while the general health showed marked sigs of deterioration, an operation was advised. Trephining over the right Sylvian fissure was accordingly performed and two buttons of bone an inch in diameter removed and the intervening bone broken away with rongeur forceps. No neoplasm or alteration was found in the brain substance, but there was marked bulging through the opening. Some slight improvement followed the operation; but a hernia cerebri formed, and though he remained conscious and *free from pain*, he gradually sank and died seven weeks after the operation. At the autopsy a tumour was found in the left lobe of the cerebellum, which was considerably enlarged. The new growth measured about 3 cm. antero-posteriorly and transversely, and about 1·5 c.m. in thickness. It had a dense capsule, and the interior was of semi-solid consistency. Microscopically examined it was found to be a tubercular growth.

This case has been referred to at some length as illustrating two important points: 1. The difficulty which besets the surgeon in the localisation of cerebral tumours in the absence of *focal* symptoms; and 2. The prolongation of life, or the relief from intolerable pain which may be obtained in even hopeless cases by the operation of trephining and the relief of the intra-cranial tension. In this case Dr. Knapp admits that the operation undoubtedly shortened the patient's life, but gave him for the time relief from pain. In future operations he recommends a larger opening and tapping of the lateral ventricles, referring to a case in which this was done with some relief.

Once again the case shows how fallacious our so-called diagnosticating signs are in intra-cranial lesions. "I advised trephining," writes Dr. Knapp, "over the right temporal lobe, being influenced by the local tenderness, the increased surface temperature in that region, the early loss of smell, and the deafness. The event showed that these indications were fallacious." Such being the case, it cannot be too strongly urged on all physicians and surgeons to publish with all minuteness of even trivial details every case of intra-cranial lesion, in order that out of the multiplicity of symptoms we may be enabled eventually to sort and sift together those which predominate in any special group, and so inspire surgeons to work with more certainty and better hope in a field which is at present so dark and so beset with difficulties and dangers to life as almost to bar operative attempts at relief in all save the extremest cases. *Lasciate ogni speranza voi che intrate.*

II.—INTRA-CRANIAL NEURECTOMY OF FIFTH NERVE.

In an exhaustive paper (*Brit. Med. Journ.*, Nov. 28, Dec. 5, 12, 1891), Mr. Victor Horsley reviews the "Various Surgical Procedures devised for the Relief or Cure of Trigeminal Neuralgia (Tic-Douloureux)," and gives an analytical table of nineteen cases in which he has performed different operations. A special method of excising a portion of the inferior dental nerve is described in detail and appears to possess certain advantages over the methods of Paravicini, Lücke, and Velpeau; but it is to what may be called the radical method of treatment—or operations directed on the points of origin of the nerve trunks or on the Gasserian ganglion itself—that the eyes of surgeons have recently been turned, and mainly through the brilliant results that have been obtained by Mr. Rose in his operation of removal of the Gasserian ganglion. In this connection it may be noted that Mr. Horsley, as the result of his experiments, believes "that the operation of complete removal of the Gasserian ganglion is not possible, but that in the operation which Mr. Rose has subsequently described only a portion of it can be taken away." Hence he was led to try the possibility of dividing the fifth nerve behind the ganglion, and, as the result of test-work on monkeys, now recommends the following procedure, which is best described in the words of its author:—"This exposure of the temporo-sphenoidal lobe in man I have carried out by making a large temporal flap, starting from the anterior extremity of the zygomatic process, and running upwards to the temporal ridge, following that line and descending along it to the asterion. The temporal muscle, after being separated from the bone, is then best removed, so far as its posterior half is concerned, and thus the whole of the squamous portion of the temporal taken away by means of a trephined hole and suitable bone forceps. Anteriorly the middle meningeal artery may be dealt with where exposed, being simply ligatured in the dura mater. The dura mater is then to be opened along the full length of the area of bone removed, and the temporo-sphenoidal lobe thus laid bare. A broad copper retractor, with smooth and everted edges, is then gently slipped underneath the lobe and slowly but steadily raised. The lobe is partly moulded, partly lifted upwards, and the floor of the skull is then easily seen and illuminated with the electric light. The guide to the fifth nerve now is the upper border of the petrous bone. The lobe being raised a little more, the edge of the tentorium will be defined, and the point at which the the fifth nerve passes beneath it could, in the first case I operated upon, be seen. The position of the canal in which the nerve is lying, just above the ganglion, must then be estimated, and a small puncturing incision made into it. As it is about a quarter of an inch in diameter, it can be recognised as soon as the puncturing instrument passes into it, and the dura forming its roof should then be further slit open. The nerve in this way is exposed, and is found to be freely lying in the little passage." In the one case in which Mr. Horsley has performed this operation the patient had already undergone excision of the inferior dental, with relief for two years, and removal of the second division at the spheno-maxillary fissure, with relief for one year, and the fifth nerve was *torn* from its attachment to the pons by this intra-cranial method. "Unfortunately the patient never rallied from the operation, and died seven hours afterwards obviously from shock." This Mr. Horsley regards as "due to the special circumstances of the case."

Quite independently of these results of Mr. Horsley, a successful case of intra-cranial neurectomy comes to us from across the Atlantic, the operation having been performed last August, and the author apparently being ignorant of Mr. Horsley's method. In the *New York Medical Journal*, March 19, 1892, Vol. LV., No. 12, Dr. Frank Hartley publishes an interesting paper, with the title, "Intracranial Neurectomy of the Second and Third Divisions of the Fifth Nerve: a New Method." The patient was a man, aged 46, who in December, 1882, began to suffer from neuralgia chiefly eferred to the mental portion of the inferior dental nerve. The ain gradually increasing in intensity, spread over the whole of the eft side of the face and head, and in September, 1884, the infrarbital nerve and Meckel's ganglion on that side were removed, with he result that for some four or five weeks he got relief from pain, hough the spasmodic twitchings of the muscles remained. Shortly fter this thirty-one teeth were drawn (!), and eighteen months ter section of the inferior dental nerve was performed, still withut relief, the pain continuing constant, and the contractions of the cial muscles averaging forty to the half hour. The patient then ame under Dr. Hartley's care. "Owing to the previous operations," e writes, "and the involvement of the lingual and auriculo-temoral nerves, I decided to attack the nerve at a point where I could ivide the second and third divisions of the fifth nerve completely y one operation. The operation intended was to attack the nerve on the inner surface of the skull outside the dura mater, to isolat the second and third branches completely, to divide and resect a large a portion as possible." The operation was performed o August 15, 1891. "An omega-shaped incision was made, having its base at the zygoma and measuring a distance marked by a line drawn from the external angular process of the frontal bone to the tragus of the ear. The curved and rounded portion of this incision reached as high as the supra-temporal ridge, the diameter of said circle being three inches." All the tissues were cut down to the bone in this incision, the periosteum then divided along the line and the division of the bone in the circle accomplished. With periosteal elevator the base of the omega was fractured and the bone turned down in a flap which contained also the periosteum muscle and skin, thus exposing the dura mater over a circular area of about three inches in diameter. "The middle meningeal artery was then tied, the dura mater separated from the bone, and the floor of the middle fossa of the skull was exposed. Broad retractors were used to raise the dura mater with the brain and to expose the foramen rotundum and foramen ovale. The hæmorrhage was stopped by sponge pressure. The exposure of the first, second, and third divisions of the fifth nerve, together with the carotid artery and cavernous sinus, was exceedingly good. The second and third divisions were isolated at the foramen rotundum and foramen ovale, and that part between these and a point beyond the Gasserian ganglion was excised. As this amount o nerve is not very great, the ends of the nerves were pushed through the two foramina, so as, if possible, to interfere with any reuni In the retraction of the dura mater, owing to imperfect instrumen the third, fourth, and sixth nerves were somewhat injured. As bleeding was present, the brain was allowed to fill the fossa. T flap—consisting of bone, periosteum, muscles, and skin—was r placed. . . . The periosteum was stitched, the muscle sutur in place, and the skin sewn with silk." One drainage tube w inserted at the lower angle. The day after the operation ptosis the left upper lid appeared, together with diplopia and inability move the eye, but these symptoms gradually disappeared, and the end of six weeks no trace of them was left. The paralysis the pterygoid, temporal, and masseter muscles produced by th division of the motor portion of the fifth was, of course, permanen but apparently incommoded the patient to a very slight extent. January, six months after the operation, the patient continued fr from pain, could attend to his business, and had gained a stone in weight. This eminently satisfactory result offers a further chance to those patients to whom the milder (though sufficiently grave) operations have failed to afford permanent relief. Now that the practicability of the intra-cranial route has been demonstrated, we shall doubtless have a host of explorers, and not improbably have the value of the operation lessened and its justifiability questioned by the reckless haste with which it will possibly be applied to a class of hopeless or totally unsuitable cases. To justify a surgeon in undertaking such a procedure there must be the fullest agreement as to its necessity on the part of the patient, his friends, and his medical advisers, and on the part of the surgeon the very widest experience, and skill, and carefulness as to details, which in cerebral, more than in any other branch of surgery, are the factors that determine the success or the failure of an operation, the credit or the discredit of the operator.

III.—TREPHINING FOR TRAUMATIC EPILEPSY.

In a paper published in the *Boston Medical and Surgical Journal*, January 7, 1892, Drs. Knapp and Post record their experience of two cases. It is worthy of notice, if only from the postulate with which they start, more especially now when every day the records of cerebral surgery are illumined with brilliant successes:—"The hope of cure from trephining in traumatic epilepsy, or from excision of the cortex in Jacksonian epilepsy, is now regarded as slight, although relief is not infrequently obtained." It is, however, a truism that, if not more, at least as much knowledge is gained from surgical failures as from surgical successes, and these cases are no exceptions.

The first case was that of a girl, aged sixteen, in whose family there was a history of insanity. Five years before she came under observation she was struck on the forehead with a stone and rendered unconscious, in which state she was carried to a hospital in Dublin, where she was then living, but after three days regained her senses, and except for a strabismus (nature not stated) which persisted for some time after the injury, recovered her usual health. She soon began to suffer from headache, "the pain being referred to both sides of the forehead and to the top of the head, but, as a rule, starting from the seat of the injury." This headache was an almost daily phenomenon. "In November, 1889, she had a convulsion (five years after the accident). There was no aura; the head and eyes turned to the right, and the limbs worked. She frothed at the mouth, could not speak, began to stutter, something came up in her throat, and then the head turned and she fell." This description certainly reminds one of the *globus hystericus* so common in ordinary epilepsy. At this period the attacks occurred about once every week. Treatment by bromides for over two months produced no beneficial results, and the attacks were now preceded by vertigo. It was accordingly decided to give her the chance of relief by operation. "She was therefore trephined by Dr. Post on the 24th of April, a button of bone was removed, the dura and a portion of adherent brain-substance excised, and as much of the cicatricial tissue as possible was removed. Some thickened connective tissue was left in close proximity to the longitudinal sinus, which could not be removed except by cutting the sinus; elsewhere all tissue was removed down to healthy brain substance." She made an excellent recovery, the wound uniting by first intention, and twelve days later was "actively employed about the ward." The following day she had two convulsions; the same the next day; after which they came less frequently, none being recorded between June 4th and 21st, when she was discharged. She shortly afterwards was lost sight of, the convulsions still occurring at intervals.

The second case was that of a young man, aged eighteen, who when twelve years of age had been struck a blow on the right temple by a negro who was chasing him. He was "dazed" for a time, but except for a "black eye" speedily recovered. In less than a year he began to suffer from seizures of indefinite character, but at the time he came under observation these attacks occurred three or four times a day in a mild form, with two or three severe seizures during the week. "The severer seizures begin by turning of the head to the left; the left side of the face, the platysma and sterno-mastoid muscles, and the left arm twitch; the neck is more affected than the face. He sometimes bites his tongue, falls, loses consciousness, and passes urine involuntarily. His physician reported that all the severer seizures began with a turning of the head to the left, and the left arm was usually affected. He frothed much at the mouth." He was admitted to hospital on April 29th, and the following day had a severe attack. On May 1st trephining was performed by Dr. Post. "The tender spot and the scar seemed to be very nearly over the centre for the movements of the head to the opposite side, and this movement was the signal symptom for the majority of the fits. . . . Almost directly beneath was found a marked bluish-white opacity of the pia, but the opacity and œdema extended in every direction under the edges of the trephine opening, so that it was clear that the lesion was diffuse." He made a good recovery, all dressings being removed at the end of a fortnight, when he had his first convulsion since the operation. On the 4th June he had passed an interval of eight days without a convulsion, having had thirteen in all since the operation. Six months later he is reported as "not materially improved since the operation. . . . For three weeks after it he was apparently well, then had several days (two or three) in which he suffered from slight attacks characterised by temporary loss of consciousness, with profuse flow of saliva and unintelligible muttering and mumbling—each attack lasting from three to five minutes. Between each series there is an interval of ten or twelve days in which he apparently enjoys very good health."

In discussing the causes of failure in these cases—although we think the conditions were somewhat improved by the operations—Dr. Knapp recognises in cases of injury to the head two factors: one, a general commotion of the contents of the cranium; the other, a local injury of the skull and the brain beneath it. "The first factor," he says, "is always present, the second is not constant." But, looking upon these cases, the question naturally arises—Were they really examples of Jacksonian epilepsy? In both we find a certain train of neurotic elements to be considered: in the first, a mother admittedly insane for eight years, and an older sister who "was rather nervous;" in the second, a mother who is very nervous, an aunt who dies of paralysis (nature not specified), and another who died of meningitis. So that we have at least elements of a neurotic tendency that demand consideration in view of operative procedures. Again, in both instances the characters of the attacks resemble much more closely in their features those of the so-called idiopathic rather than those of the traumatic or true Jacksonian epilepsy. These cases, therefore, seem to point rather to the necessity for the judicious selection of cases than to the failure of the operation in undoubted forms of epilepsy, where the source of cortical irritation is certainly dependent on some localised pathological condition, and not on a vague lesion incapable of being accurately diagnosticated or limited. Injudicious application of an operation, however good and firmly established, always brings discredit upon both operator and operation; much more so when the surgical procedure is as yet in its infancy, and requires careful sheltering from the east-winds of criticism in order to preserve a spark of vitality in it.

As regards the surgical details of these cases, reported by Dr. Post, there is nothing of importance in connection with them, except that in the second case, in which a large area was exposed, there was troublesome bleeding from the diploe, which was easily controlled by the use of a wax suggested by Mr. Horsley. This is made according to the following formula:—

℞. Ceræ flavæ, 1;
Vaselini, 4;
Acidi carbolici (1–40),
Ceræ albæ, āā. q. s.
M. Boil before using;

and is certainly an advance on the older method of plugging the bone with a wooden match! With Dr. Post's closing remark we thoroughly agree, provided that suitable cases are selected:—"The danger of the operation seems to be very slight indeed. I suppose it would be the common feeling of all surgeons at present that while no operation should be done unnecessarily, there is practically no more danger in trephining an adult in good health than in going through the soft parts."

(*To be continued.*)

THE UNIVERSITY OF VIENNA.

The number of medical students at the University of Vienna last summer was 2,427, and of these 348 were foreigners of various nationalities. The numbers have considerably fallen off as compared with the previous winter, when there were 3,242 students in the medical department. In the summer semesters immediately preceding that of 1891, the numbers of medical students had been respectively 2,296, 3,185, 2,553, 3,105, &c. There has also been some diminution in the number of foreigners attending the school.—*N. Y. Medical Record.*

THE AMERICAN JOURNAL OF SCIENCE.

This purely scientific monthly has been in existence since 1818, and, under the editorship of the brothers Dana, maintains its high character. It is published at New Haven, Connecticut. The number before us contains thirteen original articles, followed by twenty pages of scientific intelligence. None of the papers bears, directly or indirectly, on medical subjects.

PART IV.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—GEORGE H. KIDD, M.D., F.R.C.S.I.
General Secretary—W. THOMSON, F.R.C.S.I.

SECTION OF ANATOMY AND PHYSIOLOGY.

President—HUMPHREY J. BROOMFIELD, F.R.C.S.I.
Sectional Secretary—A. BIRMINGHAM, M.B.

Friday, March 25, 1892.

The PRESIDENT in the Chair.

Extreme Anomaly of Heart.

PROFESSOR BIRMINGHAM read a paper on a case of extreme anomaly the heart; for the specimen which was exhibited he was indebted to . Joseph O'Carroll. The girl from whom it was removed had been der observation for some years. *History* :—Age, twenty-one; small e; clubbed fingers; cyanotic appearance; suffered from metrorrhagia fifteen and again at eighteen; then treated by curetting uterus and ine injections; four days after, right hemiplegia developed; communi- ion between two sides of heart diagnosticated; recovered in two months. year later admitted to hospital suffering from phthisis, from which she d in a month. Physical signs: apex beat on right side of sternum; sh systolic murmur from 2nd right interspace down to a point 2 inches ow right nipple; 2nd sound loud, sharp, accompanied by beat, felt by d, in 2nd right interspace. *Post-mortem.*—Abdominal organs normal osition; lungs tubercular, anatomically normal. The heart and large sels presented very unusual conditions; the chief anomalies are as ows:—The apex is directed to the right; whole organ twisted on long , so that left ventricle forms nearly as much of anterior surface as right. ta comes off from right ventricle in the position normally occupied pulmonary artery; goes back over root of right lung, forming a right aortic arch. Pulmonary artery arises from same (right) ventricle: it internal orifice is on posterior wall of ventricle, half way between ba and apex amongst the columnæ carneæ; has a funnel-shaped valve higher up; diameter of orifice of valve little over ¼ inch (diameter of aorti orifice ⅝ inch). A large aperture is present in upper and anterior par of interventricular septum, admits thumb; two ventricles communicate freely. No artery arises from left ventricle; its blood was probably sen through the foramen in the septum and on into the aorta through upp part of right ventricle. The septum auriculorum is almost entirely abs and the two auricles communicate by aperture which admits three fing No auricular appendix lies at the base of the heart to the right of t arterial trunks, although the atrium of right auricle is here; the t appendices lie side by side on the left of the aorta. The left sup cava is persistent.

The author pointed out how the production of the various anomali might be explained by a reference to the development of the heart. T aperture in the septum of the ventricles was due to the failure of t septum bulbi to meet the septum inferius of the ventricles. He al pointed out the probable course of the circulation, showing how it mig be moderately efficient notwithstanding the irregularities of the hea And he referred to the method of production of the physical signs observ during life.

Dr. O'Carroll—Dr. Birmingham has unravelled a difficult case in much clearer manner than I had thought possible. It seems to me th in faults of development we must look to some abnormal force as u setting the normal course of growth. In this case a morbid sign, distinct from a developmental fault, is seen in the adherent condition the otherwise well-developed pulmonary valves—that is, in all probabil the patient had an adhesive pulmonary valvulitis in utero. Such a co dition, by the necessity for re-arrangement of the circulation which entails, seems to me to account fairly for the halt in development of t ventricular and auricular septa. As to the cause of the rough syst murmur heard during life, while I do not deny that it may possibly ha been augmented by the double stream in the aorta, I feel pretty confid that the murmur was in greater part produced in the pulmonary art where the funnel-like condition of valves seems eminently suitable for t production of a murmur; and I am confirmed in this view by the f that the murmur was audible not merely in the aortic area of this c but downwards towards the right nipple—that is, corresponding to t abnormal position of the pulmonary channel. Lastly, the accented sec sound seems most easily explained by the fact that the aorta has her its beginning, no right auricle and pulmonary artery to act as p between it and the thoracic wall, but lies immediately behind it. is interesting, from the clinical standpoint, to remember that th appeared, during the three years in which I kept her under observation, no reason why this patient should not have enjoyed a normal length of life had she not fallen a victim to a rather rapid attack of pulmonary phthisis.

Dr. Woods thought that some light might be thrown on the course of the blood-current by calculating if there was any difference (and if so, what?) between the pressures in the pulmonary arteries and aorta respectively, by measuring the thickness and calibre of the vessels, and using the formulæ $P \propto \frac{T}{r}$ or $\frac{t}{r}$ where $P =$ blood-pressure, r the radius of curvature, and t the thickness of the wall.

Professor Birmingham, in reply, was glad to hear Dr. O'Carroll's opinion as to the production of the murmur and of the beat, which seemed very probable. His explanation of the cause of the anomalies in the septa of the heart was very ingenious, but he (Prof. Birmingham) did not think that a valvulitis producing such a pulmonary valve as that in the specimen could be present before the time of normal completion of the septa. Regarding Dr. Woods' remarks, he thought it would be interesting to carry out his suggestion. Owing to the fact that both aorta and pulmonary artery come off from the same ventricle, the blood sent through both was driven by an equal pressure, but the resistance offered by the pulmonary system was much less than that offered by the column of blood in the aorta; consequently more blood could pass through the narrowed pulmonary valve than at first sight would appear possible.

The Cause of the Light Reflex on the Retinal Vessels.

Mr. Story criticised the various views published as to the causation of the light streak seen on the retinal vessels in ophthalmoscopic examination, and expressed himself in favour of that advocated by Schneller, and which was originally proposed by the very earliest observer, E. v. Jäger—viz., that the light streak is a reflection from the anterior wall of he retinal blood-vessels. Jäger subsequently gave up this theory in avour of the view that the convex wall of the blood-column itself was he source of the reflex, the vascular walls being too transparent to produce the observed phenomenon. Another view has been proposed by Loring in 1871, and advocated again last year by Davis, which assumes hat the light streak is caused by the blood-column acting as a cylindrical lens upon the light transmitted through it from the deeper illuminated issues to the observer's eye. This view is unsound for many reasons—e.g., the light streak is white, not red, moves with the rotation of the ophthalmoscopic mirror, and is unaltered by the colour or illumination of he background. Jägers' theory that the blood itself causes the reflex is based upon the erroneous opinion that the vascular walls are quite invisible. They are easily seen in all eyes—at least in the larger blood-vessels—and the whole experimental and clinical evidence goes to prove that it is from these vascular walls that the light streak is reflected.

Mr. Story's communication was briefly discussed by the President an Drs. Birmingham and Woods.

Descending Degeneration from a Lesion of the Superior Temporal Convolution in a Monkey.

Dr. W. H. Thompson said the lesion was kindly made by Profes Schäfer, and after death was found to involve a small portion of the upper end of the superior temporal convolution, and also to extend to th margin of the ang. gyrus. None of the motor area was involved, nor was any paralysis observed.

Degenerated fibres (traced by Marchi's method) were found in th posterior part of the internal capsule on the side of the lesion. Lar degenerated fibres were found in the middle region (motor) of bot internal capsules. Those in the posterior part were traced up into th injured convolution, and to nowhere else. They were also followed int the extreme outer part of the "pes" of the crus, and from thence int the pons. They were not traced with certainty lower than this, th investigation not being yet complete. The degenerated fibres found the middle regions were traced into crus and pons also. Their upp termination was not determined, the fluid having failed to penetrate th pieces of brain through some unknown cause. The animal was put death by anæsthesia at the end of nineteen days.

The Section then adjourned.

SECTION OF OBSTETRICS.

President—Andrew J. Horne, F.R.C.P.I.

Sectional Secretary—F. W. Kidd, M.D.

Friday, March 18, 1892.

The President in the Chair.

Specimens Exhibited.

Dr. Conolly Norman exhibited two cases of dermoid cysts, obtain as pathological specimens from patients who had died in the Richm Lunatic Asylum from diseases connected with their insane condition, n having exhibited any symptoms during life that would have led any to suspect the existence of these tumours. One was about the size of turkey egg, and the other was very small, but its nature had be verified by a most careful microscopical examination.

He also exhibited a specimen of tubercular disease of the Fallop bes, with the typical appearance of that disease, obtained from a patient ho died of general tubercular disease, involving disease of brain, lungs, d mesenteric glands. In this case, too, there had been a most careful roscopic examination, resulting in the discovery of numerous tubercle cilli.

Drs. **Doyle** and **Macan** spoke, and Dr. **Norman** replied.

Notes and Remarks on a Case of Hysteromyomectomy.

Dr. F. W. **Kidd** read "Notes and Remarks on a Case of Hystero-omectomy." He brought forward the report of this case with the ects of—(1) Emphasising the precaution that should be taken in aking a preliminary examination under an anæsthetic in any case here the slightest doubt existed as to the nature of an abdominal our. (2) That even then the surgeon should be prepared to deal h the most serious complications, and should approach the operation, ng such surgical appliances as might be necessary in case his diag-was at fault and he had to finish by an operation very different n that which he had laid down in his own mind at the beginning. To draw attention to the fact that large semi-solid and solid abdo-al tumours may exist for a comparatively long period without the ent having any suspicion of their presence. (4) To submit the tem-ature-chart of the patient, which was very peculiar, for this reason, for the third, fourth, and fifth weeks after the operation the tempe-ture was subnormal, ranging from 96·7° to 98°, and that this period synchronous with the period during which the lower angle of the minal wound remained open during the gradual discharging of two ng silk ligatures that had been used in tying the broad ligaments. healed when the second ligature came away, and at the same time temperature became normal. Dr. Kidd ascribed the condition of perature to the fact of the suppuration going on, and asked for the nion of the members on this point.

The patient (aged thirty-two), when being treated for an ordinary ous attack in May, 1891, was found to be the subject of an abdominal mour. The menses had been regular until four months previously. when they came at intervals of five weeks and were more profuse, ng 5-7 days. Vaginal examination was very difficult owing to the men being unruptured and to the vagina being narrow, and to the tient being very nervous. Tumour extended from symphisis pubis to bilicus, semi-elastic, no fluctuation. Sound passed 2¾ inches; tumour med more prominent on right side—at this time it was diagnosticated as yoma. The following September tumour had increased in all diameters, d given rise to bladder irritation, interfered with locomotion. Menses a longer interval between them, but were even more profuse than in May, and were accompanied by pain. The sound passed 2¾ inches, and tumour, when rotated, only moved the handle of the sound as much as if the movement was communicated and not direct. On this occasion diagnosis of ovarian tumour was made. Patient had not been examined under an anæsthetic. Operation, performed on 29th September, proved it to be a rather œdematous myoma. In consequence of not having transfixion pin, elastic ligature, and serre nœud, these had to be sent for. The abdominal incision was 6½ inches long before the tumour could be lifted out of the abdomen. The ovaries and tubes were removed with the tumour, as, owing to the size of the tumour and the fact that these organs were placed far behind it, they could not have been reached and removed without first lifting the tumour out of the abdomen. The broad ligaments were ligatured on each side by three ligatures by silk that had previously been boiled in corrosive sublimate solution and then kept in absolute alcohol. The elastic ligature was fastened as low down as was possible, so that the stump could be drawn up into the lower angle of the wound, the delta metal transfixion pin introduced, the tumour amputated, the cavity of uterus in the stump was cauterised, and so was surface of stump, which was treated extra-peritoneally. The elastic ligature was left on permanently. The peritoneal cavity was occluded from possible infection from the stump. Stump was dressed with iodoform gauze packed round it, and dusted with a powder containing three parts of tannic acid to one of salicylic acid. Operation lasted over two hours; patient suffered from no collapse; wound not dressed for a week; incision then perfectly united. Stump came away on the 18th day. Temperature never reached 100° F., but remained subnormal for three weeks after stump came away, during which time the sinus at lower angle of wound did not heal. On examining the specimen it was found to consist of two myomata amalgamated. The cavity of the uterus embodied in the tumour only measured 1½ inches. The amount of enlargement of the cavity was very small considering the size of the tumour. When the patient was first seen and the tumour discovered, although then the size of a fœtal head at full term, she was positive in her assertions that she never had been aware of its existence. Had the patient been examined under an anæsthetic, Dr. Kidd thinks the right diagnosis might have been made, and Dr. Kidd would always pursue this course in future. When any possible doubt existed as to the diagnosis, Dr. Kidd would in future be prepared to deal with the unexpected.

Dr. Atthill said that though errors of diagnosis could hardly be entirely avoided, still their occurrence would be rendered much less frequent were the patient examined while under the influence of an anæsthetic, as should happen in all doubtful cases. In Dr. Kidd's case the patient suffered from profuse menstruation, and that symptom points to the probability of the tumour being uterine, menorrhagia being rare occurrence in ovarian disease; also the frequent desire to micturate is seldom observed in the latter, but is often complained of by patients who are the subjects of uterine myomata.

Drs. Hoey and Doyle also spoke.

Dr. Kidd replied. In reference to what Dr. Atthill remarked about the probability of the tumour being uterine because of the occurrence of profuse menstruation and bladder symptoms, Dr. Kidd held that, as the menstrual periods were at longer intervals than usual, and as the tumour was diagnosticated as being ovarian with uterine adhesions, the element of doubt still remained, as prolonged intervals between menstruation and bladder irritation might be caused by an ovarian tumour with adhesions as well as with a purely uterine tumour. Dr. Kidd regretted that none of the members had touched on the point of the subnormal temperature for three weeks as being dependent on the suppuration caused by ligatures being expelled.

The Causes and Treatment of Dysmenorrhœa.

Dr. More Madden read a paper on the above subject. [It will be found at page 372.]

Dr. Atthill, though he agreed with Dr. More Madden on some points, could not do so in others. He believed that flexions of the uterus very rarely, if, indeed, ever, were *per se* a cause of painful menstruation; but if endometritis were present in addition to the flexions or a conical cervix and pin-hole os, then the function would probably be painful. As to mechanical obstruction as a cause of dysmenorrhœa, that was exaggerated. You met with cases frequently in which the os uteri was very small, and yet the function was painless for years, and then became painful. Sexual intercourse, in such cases, tending as it did to cause an increased determination of blood to the organs of generation, was sometimes the exciting cause of dysmenorrhœa in such cases. Cold was another inducing cause of congestion and subsequent inflammation of the endometrium. As to treatment in inflammatory cases, division of the cervix or dilatation were, if practised, only preliminary steps to such treatment as would remove or relieve the local disease, and neither should be practised unless the stenosis were such as to prevent the free exit of the menstrual flow and of the mucous discharge which always was present in these cases; but, if the cervical canal were too narrow and os too small to permit of this, dilatation or division was justified. It should be borne in mind that dilatation was only a temporary proceeding, and that within a few days after it had ceased to be practised the os and canal would be as small as ever; therefore, if pregnancy did not occur immediately no permanent benefit followed, and it was frequently better to divide the cervix, taking care to prevent the incisions healing up, but neither procedure alone would suffice. The endometrium must subsequently be treated. Dr. Atthill objected to the use of any form of metrotome, and always used a scissors for the purpose of dividing the cervix. No doubt, in some cases the pain was due to spasmodic contractions of the muscular fibres of the uterus, which dilatation might relieve, but seldom cured. In a case recently under his care, in which amenorrhœa had existed for months, pain at tolerably regular periods and of an excruciating character was experienced. Benefit in this case resulted after dilatation had been regularly practised at short intervals for some weeks.

Dr. More Madden replied.

THE MICROBE OF MEASLES.

The *Berliner klinische Wochenschrift* of April 18, 1892, contains a paper by Drs. P. Canon and W. Pielicke, Assistant Physicians to the Moabit Hospital, Berlin, in which they give the results of researches on the bacteriology of measles recently made by them. At the suggestion of the Director, Dr. P. Guttmann, Canon and Pielicke made stained preparations of the blood of 14 patients suffering from measles, and in all cases they found "one and the same" bacillus. The preparations were made in the same way as in Canon's researches on Influenza (see *Brit. Med. Journ.*, Jan. 16, 1892, p. 129), and were stained with eosin-methylene blue solution. In the preparations the bacilli were found stained blue, sometimes uniformly, but frequently much more deeply at the ends than in the middle; sometimes only the edges of the middle portion were stained. The bacilli vary much in size—sometimes they are as long as half the diameter of a red blood corpuscle, sometimes they are quite small and have the appearance of diplococci. Occasionally they are of extraordinary length, almost equal to the diameter of a red blood corpuscle. The bacilli were found during the whole course of the disease, and in one case even three days after defervescence. As a rule, they were found most abundantly at the time of defervescence. Bacilli of the same shape as those found in the blood were seen in the expectoration and in the nasal and conjunctival mucus of patients suffering from measles. Drs. Canon and Pielicke succeeded in making first cultures of the bacillus in bouillon, but the organism (which they regard as specific and the true exciter of measles) would not grow on the other media usually employed, nor could further cultivation be obtained from the bouillon.—*Brit. Med. Journ.*, April 23, 1892.

REMINISCENCES OF THE DUBLIN BIOLOGICAL CLUB.[*]

By ARTHUR WYNNE FOOT, M.D.; Senior Censor and Vice-President, Royal College of Physicians in Ireland; Senior Physician, Meath Hospital, &c.

THE object aimed at in this communication, entitled "Reminiscences of the Biological Club," is a retrospective glance at its origin and progress. It can be nothing more than a sketch or outline, both because the subject is large and the canvas small, and because time allows of only the briefest allusion to some of the many persons and places which have at one time or another been identified with this club—a club unique in some respects and peculiar in many.

As the club is now in the twenty-first year of its existence, and as I am one of the five surviving original members who remain connected with it, it has been an amusement to me to look over its records with a view of preserving some information about its early history from falling into oblivion.

The club has gone through three distinct epochs or periods of existence—the first, its infancy, was passed in Trinity College, and lasted for three years; the second, its youth, continued for a space of seven years, during which it was lodged in Great Brunswick-street; and it may now be said to have reached maturity, since it has been located on the premises of the Royal College of Physicians of Ireland in Kildare-street, where it is spending the eleventh year of its tenancy, and the twenty-first of its existence.

The Biological Club was formally inaugurated and christened in No. 30 T. C. D., north side of the Belfry-square, on Saturday evening, 6th of January, 1872. On that date a meeting was held there, at 8 p.m., "to consider the expediency of forming a scientific club." There were nine present at this meeting—James Adams Clarke, George Frederick Duffey, Charles Edward Fitzgerald, Arthur Wynne Foot, Thomas Evelyn Little, John Mallet Purser, Henry Rosborough Swanzy, John Todhunter, Gerald Francis Yeo. Some others who had been invited to attend but who were not present at this meeting were—Edward Hallaran Bennett, Edward Wolfenden Collins, Reuben Joshua Harvey, John William Moore, Richard Rainsford. These five latter were co-opted with the nine others present to form the *original* members, making fourteen in all. R. J. Harvey was elected secretary and treasurer for the ensuing year; the subscription was fixed at ten shillings a year, each new member to pay in addition an entrance fee of ten shillings. The election of new members was to be by unanimous vote. It was further arranged that the club should meet in No. 30 T. C. D., at 8 p.m., every Saturday night, for eight months in the year, from the last Saturday in October to the last Saturday in June. The chairman—to be elected each evening as soon as three or more members had arrived—was given absolute control over the proceedings.

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[*] Read before the Club, 5th Apirl, 1892.

Of the fourteen *original* members four have left Dublin—J. A. Clarke, E. W. Collins, G. F. Yeo, J. Todhunter, but are all at present (April 1892) living, and *honorary* members; two others have resigned—J. W. Moore and C. E. Fitzgerald; three have died—R. Rainsford (Feb., 18 R. J. Harvey (Dec., 1881), and T. E. Little (Nov., 1891). Of the fourteen five still remain in Dublin—E. H. Bennett, G. F. Duffey, A. W. Foot, J. M. Purser, H. R. Swanzy.

Within the first month of its establishment four members were added to the club—all of whom, strange to say, have since died—Robert M'Donnell, Henry Wilson, Benjamin George M'Dowel, and Anthony Corley. Foreseeing a rapid increase in numbers from its then total of eighteen, it was soon (3rd Feb., 1872) resolved that the number of members should be limited to thirty. In the same month (23rd Feb.) it was resolved that each member should contribute a paper, at least once during the year, as a condition of membership. A committee of three was appointed (8th Mar., 1872), called the Morbid Anatomy Committee, to report upon any specimens as to which there might be a difference of opinion; the three selected were T. E. Little, J. M. Purser, and G. F. Yeo. This is now called the Committee of Reference. At the same time it was resolved that recent specimens should have the precedence of papers for the evening; recent specimens were defined to be such as would be injured by being held over to the next meeting. Early in this session (17th Feb., 1872), the night of meeting was changed from Saturday to Friday, chiefly because of Saturday being a very usual night for dinner parties.

The second session (1872–73), opened in T. C. D. (4th Oct., 1872) with twenty-two members, and a balance in favour of the club £4 17s. 10d., £2 of which was allocated towards the coal fund. R. Harvey was re-elected secretary and treasurer for the ensuing year. the first meeting of this session it was resolved that the mode of elec should be changed from its original form—that of an invitation sig by all the members—to a ballot, one black bean in ten to exclude, ab members to have the right of voting by proxy. The night of mee again changed to Tuesday (by resolution 21st Feb., 1873).

The vigorous nature of the club is indicated by a resolution pas near the end of the session (24th June, 1873), to continue the wee meetings on all through the summer and autumn months, instead closing in the last week of June. This step was taken without calling general meeting, there then being no fear of "rules" before the eyes of the members. To facilitate this innovation the hour of meeting was changed to 8½ p.m., for the extra evenings. There were exertions made even so long ago as the second year—notice of motion promised—to obtain possession of a good microscope for the use of the meetings. The club continued to meet on Tuesday evenings at 8½ p.m., on through the autumn. The meetings, though not very regular, and often small, were frequently pleasant enough. The minutes of 9th Sept. (1873) record that three members were present. After the conclusion of some light business, it was proposed and seconded, and their being no dissentient—as the chairman sagaciously declined to vote—it was carried, that the club should adjourn to Professor Hynes', in the city, to study the anatomy, physiology, and therapeutic properties of some common bivalve molluscs. There were then no apprehensions of enteric fever latent in the minds of any ostreophagist.

The third session (1873-74), opened in T. C. D., 7th Oct., 1873. R. J. Harvey resigned the office of secretary and treasurer, and G. F. Yeo was elected in his place. A sum, not to exceed £11, was voted from the club funds for the purchase of a microscope. As a result, perhaps, of the over-exhaustion of the previous summer the material for the evening meetings became more and more scanty, and it sometimes looked as if the club would collapse from well-marked uncomplicated starvation. A special discussion took place (14th Oct., 1873) on the best mode of supplying pabulum for each evening of meeting. There was no nclination to repeat last year's experiment of keeping at work all through he summer, and the third session ended 23rd June, 1874.

The fourth session (1874–75), opened with thirty members (the full umber) in T. C. D. The room in No. 30 having proved inconveniently mall, R. J. Harvey, T. E. Little, and the secretary, G. F. Yeo, were eputed to look out for more commodious quarters. Their labours ended n the renting of a large room in 212 Great Brunswick-street, over larendon's Riding School, at the western side of the Queen's Theatre, or a period of six months, at a payment of six shillings an evening. his house now forms part of Mackenzie's buildings facing Tara-street. he first meeting of the club was held in this room, 3rd Nov., 1874, and ere the club assembled for seven years, till they moved to the premises the Royal College of Physicians, in Kildare-street. At the last eeting of this session the secretary and treasurer, G. F. Yeo, tendered s resignation after two years of office; the minute book records that it as accepted "*with acclamation.*" This entry, which is in G. F. Yeo's n unmistakable handwriting, is indicative rather of his personal elings upon being released from an irksome office, than of any reflection the part of the club upon the way in which he had discharged his ties.

The first three years of the club's life were passed with the careless indifference of youth in No. 30 T. C. D.—indifference, *i.e.*, to many details of ease and comfort which would now cause a general outcry had they to be submitted to. The meeting room was on the ground floor, the accommodation very unlike what we have at present, but the evenings were often, if not always, as lively and as instructive as they have ever since been in more pretentious quarters. The room belonged to R. J. Harvey and C. B. Ball, the latter was early elected (27th Feb., 1872) an hon. member in recognition of his courtesy in allowing such a weekly trespass on his premises. Seven years later C. B. Ball was elected an ordinary member (21st Oct., 1879). [The conditions of hon. membership were at that time quite different from what they are at present. The order is now confined to "former members of the club who have left Dublin."] R. T. Stack was a parallel instance; he was elected an hon. member while unqualified (18th March, 1873); four months afterwards (1st July, 1873), having taken his degree, R. T. Stack was elected an ordinary member of the club.

Seats were scarce in No. 30, and were secured of course by the earliest arrivals, so that it was one of the first regulations that each new member should provide himself with "a chair, to be left in the club room, whether such person were to continue a member or not." When the rule allowing each member to introduce one visitor was passed, the chairman expressed a hope that owing to the paucity of seats this privilege would be used by the members with discretion. As our room of meeting was low and small, the two windows looking out upon the Belfry-square were usually wide open, both sashes and shutters, for sake of ventilation, and so, the room being on the ground floor, our proceedings were often observed with curiosity by inquisitive students passing to and fro in the courts outside. They were much exercised in mind as to the nature and objects of our assembly. The company seemed too amicable for the meetings to have a political complexion, and not sufficiently dignified to be a branch of the philosophical or theological societies. Some suggested it was a gastronomic sodality, others held it was a vivisection club. It was rumoured among the jibs through Botany Bay that the resurrectionists in No. 30 had been seen handing brains, livers and kidneys from one to another, and heard saying they were exquisite, and also filling pipes and drinking beer with unwashed hands round a table covered with dishes and trays full of human entrails. Some of them thought it wrong that the Provost should be kept a moment longer in ignorance of this state of things. Occasionally the window spectators gathering courage from their numbers—particularly at the time of year when there was bright daylight—would extemporise witty remarks at the expense of individual members of the club, and sometimes even became so noisy with ironical applause after a learned disquisition on polio-myelitis or hæmorrhagic infarction as to disturb the stillness of the square itself. On such occasions it would be proposed, seconded, and carried, *nem. con.*, that a sally should be made in force and a victim captured, whose punishment was to be immediate deprivation of the testes without benefit of anæsthesia. The position of the room on the basement allowed of such a threat being rapidly executed, so that the mere suggestion of it was instantly followed by the rapid flight of the busy mockers, who for some time after used show considerable caution in loitering about the windows of No. 30.

In this, the Trinity College, period of the club, beer was the only fluid supplied for refreshment. There was no coffee, no aerated water, no such things as cigars or cigarettes; there was no soap or water, no basins, towels, or spittoons; matches were not provided, a well-twisted light of paper was a convenience not to be lightly cast away, and polite requests of "after you" were the order of the "night." "Churchwardens" were purchased by the gross from the makers in Francis-street, but after a time were given up, as inconvenient from their length, and because the number of fractures among them was incalculable, from want of a suitable place for storage. The beer was kept on draught, in half-barrels, light ale from Greenwood & Pim, of the Harold's-cross Brewery, long since closed; £1 1s. the half-barrel. The cask reposed on a bed of coals on the floor of a small closet, which formed a combination of coal and beer cellar, and also served as a tenement for some guinea pigs, white rats, and a kid which frequently, when in full evening dress, wore a manometer—I think it was called—in its carotid artery, or some other part of its neck, which made it look particularly uncomfortable. The contents of this aforesaid cask were subject to the strangest fluctuations in bulk, to discover either the cause, cure, or prevention of which several scratch and some select committees were appointed. Their reputations for acumen were invariably damaged by collision with a problem which proved to be insoluble. It is to be borne in mind that the solution of every mystery by a microbe had not been then invented, or perhaps a *Coccus beeriophilus* might have been discovered to be the culprit. The theories constructed to account for the remarkable diminution of the beer-content, mostly evolved from clouds of tobacco smoke, were leakage, evaporation, fraudulent paracentesis, and capillary aspiration. Even spontaneous annihilation was mooted—why not? Many then believed in spontaneous generation—why should there not be a Buddhism for beer, when it was the drink of the immortals?—the biological members. The problem remained insoluble. Of course no one was uncharitable enough to suspect the "skip," Tim O'Loughlin by name. "It was poor thin stuff for a working man like him to fancy; when the gintlemin come to his age they would like something a bit stronger. If it was in the regard of sperrits it was, he would not be agin saying a drop of it would do a body no harm after the cleanin' up the likes of such a room on a fashtin' stummick." His explanation of the phenomenon, as well as it could be gathered from him in rare lucid intervals, was to the effect that the frequent disturbance of the cask, in subtraction of its underlying bed of coals, upset its equilibrium, producing such a redistribution of molecules as to effect a liquid sclerosis and diminution of bulk. He had always heard that no noise or commotion was ever allowed near the celebrated "*October ale*" where it reposed, on stately oaken trestles, in the college cellars. Various preventive measures were in turn suggested, and objected to or rejected. It was as true then as now that preventable diseases strongly object to being prevented. Among the remedies proposed for the atrophy of the beer-content one was to introduce, with due solemnity, into the cask ¾ oz. of the *antimonium tartarisatum*, B.P., and await the notification of acute illness in the district. This came from a disciple of Æsculapius. A pupil of Galen, who was the inventor of a thirty-ninth method of treating fractured patella, suggested that a trapdoor should be constructed in the floor through which the cask might be raised to the upper air while the club was in session and restored to its mausoleum each night before the chairman left the chair. The beer-coal-closet could not be kept locked because, in addition to the menagerie, it afforded shelter to a dilapidated slopbucket and a headless broomhandle; and the skip, in his anxiety to keep the room clean, found it necessary to have access at all times to these hygienic implements. Experience finally taught us that to keep the beer in bottles was a more convenient and economical arrangement, and it has been the method adopted during the second and third periods of the club's life.

In the three years while the club met in T. C. D. it held 110 meetings, the average attendance at which was nine, the maximum number present seventeen, the minimum three. This minimum number was in the second year (2nd Sept., 1873), when the club was meeting in the autumnal months, and when its vital force was at the lowest ebb. The greater number of the communications made were of a purely pathological nature, very few of a surgical, and still fewer of an obstetrical purport were made. The exhibition of a living specimen was unheard of.

The fourth year of the club opened in 30 T. C. D. (7th Oct., 1874), but within one month its quarters had been shifted to 212 Great Brunswick-street, where it held its first meeting on 3rd Nov., 1874. It appears that the commencement of this year found the club flush in cash, because the opening meeting concluded with a resolution, in acting on which no time was lost, that the club do adjourn without delay to D'Olier-street to eat oysters, "*at its own expense.*" This method of assimilating the funds questioned at a subsequent meeting as a misappropriation of the club ty, but a motion, on the part of some of the absentees on the occasion, censuring the ringleaders in this extravagance fell to the ground, and ended "in a great smoke." However, the symposium which inaugurated this session will, like O'Rorke's noble feast—

. . . N'er be forgot,
By those who were there, and
By those who were not.

The fifth session, 1875–76, finds the club meeting on Tuesday evenings in 212 Great Brunswick-street. Treasurer's account showed balance due to late treasurer (G. F. Yeo), of £1 2s. 7½d. At the first meeting the offices of secretary and treasurer, hitherto combined, were separated, and C. J. Nixon was elected secretary and R. J. Harvey treasurer, for the ensuing year. Hon. members, in the present sense of the term, were instituted at the opening meeting (5th Oct., 1875). A great desire to be tied and bound by rules, perhaps in consequence of the recent irregularities in the way of suppers, led to the appointment of a committee (C. E. Fitzgerald, A. W. Foot, R. J. Harvey, J. M. Purser), to manufacture fetters. The result was a code of 41, since increased to 44 rules. Ballot was altered from 1 in 10 to 1 in 7 (its present form). The enactment of penal laws reached a climax on 12th Oct., 1875, when the celebrated rule, No. XXI., called the guillotine, was adopted. This rule then read as follows:—"Any member who shall not attend at least three times in a session, or assign a satisfactory cause for his absence to the annual general meeting next following, shall, *ipso facto*, cease to be a member." A resolution was carried (23rd Nov., 1875) that every member should, in alphabetical order, make a communication to the club or find a substitute to do so, under a penalty of 5s. for the first offence, 10s. for the second, and forfeiture of membership for the third. This rule never produced much money. However, three years after it was made, at the last meeting of the session 1878–79, Stewart Woodhouse apologised for having failed to make his stated communication, and begged to offer the club half-a-dozen of best champagne in lieu of fine. The offer was accepted, without a dissentient voice, even on the part of the total abstainers, as a spirited equivalent, and it was even hinted that it would be agreeable if some of the other members would, now and then, present their communications in this sparkling form. What became of the champagne does not appear on the face of the minutes, nor would it be fair to expect it to do so. The precedent has not been at all generally followed—in fact it still remains unique; but, as history is said to repeat itself, we know not when some modern member may wish to rival the deeds of the good and great of former times.

On one evening in the sixth session (21st Nov., 1876), Dr. Brown-Séquard was present as the guest of R. M'Donnell. The illustrious visitor expressed his approval of what he saw and heard, but made no allusion to the club about his *elixir vitæ*.

The club had been hardly two years in Great Brunswick-street when it began to look about for other quarters, for at a special meeting (28th Nov., 1876) it was resolved to seek the permission of the College of Physicians to meet on their premises. The next allusion to the club-room is on 17th April, 1877, when the secretary announced that the Chief Secretary for Ireland had, at the request of the Council, allowed the room in which the club met to be registered under the Cruelty to Animals Act, 1876. The first death in the club occurred at the end of this session, when it lost a valued and influential member in the person of Henry Wilson, who died from pneumonia, at the age of forty, on 13th June, 1877, at his house in Merrion-square, West (now No. 94). He was not an original member, but had been over five years in the club. He was Senior Surgeon to St. Mark's Hospital, and had been for some years at the head of his department of surgery. He was universally liked for his friendly and affable manner. He made many communications to the club on the surgery of the eye. There is no record of his death in the minutes of the club, as he died the day after the closing meeting in June, and he seems to have been, like other dead men, out of mind at the beginning of the next session. There are, however, still many here and elsewhere who require no minute to call up agreeable recollections of Henry Wilson.

In the commencement of the ninth session (21st Oct., 1879), an invitation from the directors of the Carmichael School to meet on their premises in Aungier-street was declined. Two £3 10s. Leitz microscopes, with stands and lamps, were ordered to be purchased for the club (28th Oct., 1879). R. J. Harvey resigned the secretaryship and his seat on the council, and C. B. Ball was thereupon elected to the vacant seat on the council, and subsequently (at same meeting) elected secretary. C. B. Ball had been elected an ordinary member of the club (21st Oct., 1879), one week previously, though he had been an hon. member since Feb., 1872, as part proprietor of the room in T. C. D. The explanation of his rapid promotion to the council after one week's membership was his long and intimate connection with the club. In the course of this session the club lost another member in Richard Bookey, who died in Jan., 1880, of phthisis, in his thirty-fourth year. He was one of the physicians to Dr. Steevens' Hospital, to which he had been appointed only twenty-two months. He was within a few weeks of having been for six years a member of the club. He was known as a successful private teacher, and an able pathologist and microscopist. He was of a silent habit and retiring manner, but could speak with energy and to the point on any subject within his own range of knowledge. Of modest, unassuming disposition, he never obtruded his information, though always ready to impart it to any inquirer. He was minutely accurate in everything which concerned his special studies. He belonged to the class of men who do a good deal and make very little noise about it, rather than to that of those who do very little and make a great deal of noise about it.

A month afterwards there was another loss to the club in the death of Richard Rainsford, Senior Surgeon St. Mark's Hospital. He had been in delicate health for two years, and died, at the age of thirty-two, on 17th Feb., 1880. He was the first of the original members to drop off the list. It was a remarkable fact that, within a space of not quite four years, death had three times removed the Senior Surgeon of St. Mark's Ophthalmic Hospital. For seven months Richard Rainsford had been a confirmed invalid, and his death could only be regarded as a merciful release from his sufferings. Condolences were voted by the club to the relatives of these deceased members. In this session the presence of a reporter was objected to by the members, and Professor Haughton, in consequence, withdrew his paper on the subject of the execution of Martin M'Hugh.

At the opening meeting of the tenth session, 1880–81, Dr. Gordon fell under the guillotine of Rule XXI. In this session (18th Feb., 1881), another loss occurred in the case of Edward Peele, who died, aged forty-two, on the 13th day of typhus, contracted as medical officer of High-street Dispensary. Edward Peele had been in the club nearly six years. He was a native of Durham. On first coming to Dublin he was attached to the choir of St. Patrick's Cathedral, where he afterwards was a vicar choral. He had a remarkably fine tenor voice, and possessed a sound musical training and knowledge. He gradually gave up the study of music and took to that of medicine. He was connected with the Hospital for Incurables, the Hospital for the Throat and Ear, and with the Coombe Lying-in Hospital. He enjoyed the confidence and respect of all who knew him. Funeral services in honour of his memory were held in St. Patrick's and Christ's Church Cathedrals, as well as in the Chapel of Trinity College, on Sunday, 20th Feb., 1881. A stained glass memorial window was put up to him in St. Patrick's Cathedral; and Sir Francis William Brady, Bart., was the author of the touching lines on his death which appeared in *British Medical Journal*, Vol. I., 1881, p. 488.

Hushed is the voice so lately raised
  In sweetest notes of sacred song;
Those notes, that God so oft have praised,
  To God, for evermore, belong.

Cold is the hand that oft has led
  The weary sufferer back from death,
When, by some lonely pain-racked bed,
  Each moment seemed the last of breath.

Still is the heart, so warm and true,
  That ever beat at honour's call,
Whate'er was right, 'twas his to do,
  To duty live, to duty fall.

The eleventh session (1881–82) opened again in Great Brunswick-street. At the annual general meeting J. M. Purser came under the guillotine of Rule XXI., but by unanimous vote of the meeting his name was retained. Communications were reopened with the College of Physicians about meeting on their premises, and notice was received from the registrar, Dr. Finny (8th Nov., 1881), that the College had granted the required permission. The club availed itself without delay of this concession, and moved there in December, 1881. Strange to say there is no notice on the minutes of this change of venue till several years after when a meeting is headed College of Physicians, Kildare-street. Dr. P. S. Abraham was elected secretary 22nd Nov., 1881. Immediately after the move into Kildare-street the club sustained a great blow in the death of another of its original members. Reuben Joshua Harvey, aged 36, died on the tenth day of typhus, caught in Cork-street Fever Hospital. He had been secretary or treasurer—sometimes one, sometimes the other, at other times both combined—for the first nine years of its existence. He had attended and joined in discussion at a meeting of the club (13th Dec., 1881), five days before he sickened. He continued to attend the hospital patient from whom he had taken the infection until his own illness had lasted at least twenty-four hours. The authorities of Cork-street Hospital considered that they had lost the services of "a most able, learned, and conscientious physician." In the vote of condolence passed by the club to his widow (3rd Jan., 1882), he was correctly described as "one of the founders of the club, to whose untiring zeal its success was mainly due." An obituary notice, dealing at length with his merits, will be found in vol. 73, p. 174, of the *Dublin Journal of Medical Science.*

A review of the second stage, or the Brunswick-street period, of the Biological Club, shows that the club met in that quarter for a period of seven years, holding there 257 meetings, an average of 36 in the year. The average attendance at these 257 meetings was 9¾, maximum number 12, minimum 3; this was was a slight increase over the average attendance in T. C. D. During a large, and that the earlier, portion of these seven years, Dr. C. J. Nixon filled the arduous post of secretary. One of his duties, and not the easiest, was to see that the fire was properly lighted in good time on Tuesday evenings. The room was noisy, owing to the proximity of the thoroughfare of Brunswick-street, draughty from its construction, and chilly from its size, and because the condition of any fire at all depended upon the energy and punctuality of the secretary. There was also a difficulty about the disposal of morbid specimens which had not existed in T. C. D. Sometimes those who brought them down to the meeting forgot or omitted to take them away again. This did not suit, as the night after our meeting the "Association of the Amalgamated Ironmongers' Assistants" met there to discuss matters of great imporce, and on the following evening the "Solicitors' Apprentices' Debating Union." The objections raised by these learned bodies to the presence of even "exquisite pathological specimens" were so marked, that a rule was made that the club would defray any legitimate expense—to be interpreted as "a car fare within the borough after 10 p.m."—incurred in their removal. On the whole the reminiscences of the comforts of 42 Great Brunswick-street are not so pleasant as those of No. 30 T. C. D. A marked result of the change from T. C. D. to Great Brunswick-street was the exhibition of living specimens. There had been a difficulty about getting such into and out of College, and besides that there was no place to store them in No. 30, while waiting, unless in the menagerie. There is no record of a "live specimen" having been brought before the club while in T. C. D.; but in the fourth session, 1874–75, the first year of meeting in Great Brunswick-street, five were brought forward: one eye, one ear, and three medical cases; in the fifth session two, the sixth none, the seventh one, the eighth one, the ninth one, the tenth four, making fourteen live specimens during the seven years the club met there, an average of two a year. The exhibition of live specimens, as they were called, was not always viewed with approval by some of the senior members of the club, who thought that the parade might be uncomfortable to the patients, and that it was also to be regarded as a ready means of arriving at a diagnosis by gratuitous consultation. T. E. Little in particular objected to it, as foreign to the nature and aim of the club, and I never remember him to have shown a living specimen himself. At the end of the Brunswick-street period the proposal to have an annual dinner at Bohernabreena, in the Dublin mountains, was discussed. It met with general approval, and the first dinner of the club took place there in June, 1881. The amusement, after dinner, used to be flying kites, shaped like hawks and other predatory birds; then quoit-playing came into fashion; of later years the *mode* has been firing with rifles at *empty* champagne bottles; no fatal accident has yet occurred, except to the bottles. The cost of the dinner was at first shared among those who chose to dine; now a sum is annually voted from the club funds towards the entertainment.

The Kildare-street period of the club began with P. S. Abraham as secretary (elected 22nd Nov., 1881). He held this office for three years. For the seven years since he resigned office G. P. Nugent has reigned in his stead. The treasurers of the Kildare-street period have been—C. J. Nixon (two years), C. B. Ball (three years), and W. G. Smith (five years). In the first session of our meeting in Kildare-street a heavy mass of a cornice fell on an evening meeting, and several of the members—T. E. Little especially—had narrow escapes of being hurt. This period of the Biological Club, being comparatively recent, need not be entered into with much detail. The thirteenth session, 1882–83, opened with the full number (30) of members. Professor Macalister came under Rule XXI.; his excuse was accepted. The treasurer's report showing a deficiency of £3 1s., the annual subscription was, with one dissentient voice, raised to £1. An attempt to increase the stringency of Rule XXI., by changing 3 to 5 or 6, failed, and it remained as before, till recently when it has been raised to 5. It was proposed to raise the number of members from 30 to 40; a compromise of 33 was arrived at. This number was fixed on as corresponding to the number of evening meetings, so that each member might have a night for his stated annual communication. At the annual meeting of the fourteenth session (1883–84), Professor Haughton, Professor Macalister, and H. Fitzgibbon were sentenced under Rule XXI. The club, appalled at the prospect of such a hecatomb, accepted explanations. The increased annual subscription having produced a balance in favour of the club, suggestions were made to return to the former 10s. subscription and negatived. The council, in the largeness of their heart, at the close of the session voted a sum of £10 towards the Bohernabreena dinner. This was providential, as in the next session (1884–85) the surplus (small) was lost in the Munster Bank.

There were no deaths in the club during the T. C. D. period. There were three in the Brunswick-street period—Bookey, Rainsford, and Peele. In the Kildare-street period four occurred. That of R. J. Harvey took place, as before mentioned, immediately after the change from Brunswick-street, and left a *hiatus valde deflendus*. For nearly ten years there were none, of existing members of the club, till three came in succession, like thunder claps, each most unexpected; and by these deaths the Biological constellation lost three of its stars of the first magnitude. Robert M'Donnell died suddenly, on 6th May, 1889. The meeting of the club, held on the following day, was adjourned in consequence, and a wreath of flowers was ordered to be sent on the part of the members to be laid on his coffin. He had been over seventeen years in the club. He had just completed his 61st year. He had returned from a holiday on the continent a few days before his death, and said he had not felt so well for a long time. On Sunday evening he dined with his venerable father (then aged 91), on his return home he wrote letters for some time and went to bed—at one o'clock, a.m., he was dead. His next door neighbour, Dr. Cruise, had been immediately sent for, but only to find his dear friend was past his aid. On 1st December, 1890, A. H. Corley died in his 50th year. He, like R. M'Donnell, had been over seventeen years a member of the club. About twelve months after, on the night of 9th November, 1891, Thomas E. Little died in his house, 42 Great Brunswick-street, unexpectedly, like both those who had preceded him. Though, probably, each of them was personally aware that he had not long to live, few outsiders were aware of the secret, which is one which medical men, because they know it so well, try to conceal, if they can, even from themselves, until the dumbness and greyness of dissolution reveal it to all. Tom Little showed his interest in the Biological Club by the regularity with which he attended its meetings. For many years he headed the list of members with the greatest number of attendances. He was not an incessant contributor, but every subject he brought forward—no matter how dry or commonplace—he immediately invested with an interest unsuspected of being resident in it; he discussed it in an original way, showed it in new lights, and made unforeseen points about it; consequently whenever he spoke he was listened to with profound attention. He was an accomplished man in many ways; a Scholar of the House, as well as the holder of a medical scholarship (1863). He was a great lover of chess, delighting in "the endless war that breeds good will." I have seen him, more than a dozen times, sitting down after 10 p.m. in the University Club to solve the chess problems in the *Dublin Evening Mail* for relaxation. He had that combination of chivalry and love of analysis without which no one can enjoy chess. He was a good musician, and had a sweet, flexible voice. His singing at some of the earlier Bohernabreena dinners will be long remembered by those who heard it. There were some who said of Tom Little "*plus aloës quam mellis habet*," but while his sweetness was never so intense as to be unwholesome, there was nothing corrosive in his bitterness. He was a very general favourite, and his large funeral was attended by many who wore more crape upon their hearts than on their hats. He was one of the *original* members; in fact he belonged to the club in its embryonic condition, before it had an independent habitation or a name. Dr. Duffey, Professor Purser, and Mr. Swanzy will recollect the period I allude to, when the primordial germ of the present club met at my house in 21 Lower Pembroke-street, on Thursday evenings, for more than a year before its establishment in T. C. D. Tom Little was one of those who most strongly urged a change of meeting place on the grounds that it was inconvenient to bring specimens, &c., into sitting-rooms, and also that so much smoking and the noise of animated debates are not quite suited for a dwellinghouse. Tom Little never held the post of either Secretary or Treasurer, but was almost a standing member of the Council, was for twenty years on the Committee of Reference, and was as often as possible voted into the chair at the weekly meetings.

A review of the ten years during which the club has been in Kildare-street discloses a marked expansion in two directions—(*a*) in the variety of refreshments provided; (*b*) in the exhibition of living specimens. The original light ale is replaced now by beer in variety (Lager, Bass, &c.); mineral waters in variety; coffee, cigars, cigarettes, snuff, in addition to cut tobacco of the choicest description. The number of waiting-rooms in the College premises in Kildare-street facilitated the exhibition of living specimens by affording convenient cages for them. During the whole seven years of the Brunswick-street period the number of living specimens brought before the club was 14. In the first year alone of the Kildare-street period the number exceeded that of the previous seven years, for it was 15. Taking the first seven years of the Kildare-street period, 123 living specimens were shown—an average of over 17 each session. An analysis of these 123 shows the large preponderance of eye cases, three times as many as those of any other class—*e.g.*, eye cases, 63; skin cases, 19; medical cases, 10; surgical, 20; dental, 3; laryngeal or throat, 3; pathological, 5; total, 123. Of the 14 patients brought down to the Brunswick-street room in seven years there were—eye cases, 3; ear, 1; pathological, 1; medical, 9. The patients brought to Kildare-street in seven years were 8·7 times as numerous as those brought in a similar period of time to Brunswick-street. None were ever brought to T.C.D. These facts show the marked progress the club has made in the direction of teaching by demonstration. There have also been several exhibitions of recent years with the lantern and limelight. The obstetric element is much more forward than it was in earlier years.

The club, now in its twenty-first year, has lived down much vilification, and falsified many predictions. It was prophesied, over and over again, that it would soon fall to pieces, that so many dissentient interests could not cohere long. Instead of that, it seems to have the secret of perpetual youth—not alas individually, for some at least must say of themselves, *non sum qualis eram.* The secret lies in the fact of its being constantly recruited from the ranks of rising merit, and annually renovated with an infusion of the best and freshest blood. The fatal Rule XXI. chops off the head of each according as he becomes wilfully careless, or hopelessly effete. It has been urged that it is a disadvantage thus to lop off the seniors, as age, infirmity, or occupation interfere with their regular attendance, and that payment of their subscription might be enough to expect from them, since they are not likely to occupy the room or consume the refreshments. But still this rule, though it often prunes away some acquiring weight and influence which might be at any time needful, is a mainspring in the vitality of the club of great importance.

The Biological Club in its early years had to put up with many sneers and scoffs, not always on the part of the youngest members of the profession. It was said to be a mutual admiration society, which met to bandy compliments under a canopy of tobacco smoke. It was called a tabagie or tobacco parliament—a Tabaks-collegium; the German Bande, by those who boasted of belonging to the *Old School*—a phrase generally meaning any school which seems never to have been young; the Beerological Club, and other names suggestive of the ridicule which often is the truest homage ignorance can offer to superiority. Yet the club flourished and increased in repute and importance, so much so that it has long been no unusual matter for papers, &c., intended for various Sections of the Royal Academy of Medicine, to be presented here for a full-dress rehearsal—to be trotted out, as it were, before the club, that their action, style, and paces might be criticised—and they are often admitted to be the better of the touching up they get before they reach the ears of the Royal Academicians, for free and friendly discussion is the essential characteristic of the Biological Club. It will be generally admitted that fear of open discussion implies feebleness of inward conviction, and that great sensitiveness to the expression of individual opinion is a mark of weakness. Truth is tough—it does not break like a bubble at a touch; kick it up and down and from side to side all day, and like a good football, it will be round and full at night. Though we have had several quiet-going members, who seemed to hold that the only condition of peace in the present world is to have no ideas at all, or at least not to express them but in reference to the most elementary propositions, yet on many occasions our discussions, when the steel and flint of trained intellects come into friendly collision, have proved a real spading-up of the ground for crops of thought.

The prediction of the speedy resolution of the Biological Club into its primary constituents has not been verified. It forms, on the contrary, an amalgamation in which religious, political, or social distinction is unknown and unheard-of. Seniors and juniors meet together in its room, though they may be far enough apart outside. Those who are firmly seated in the saddle of professional success, exchange ideas with those who are but winning their spurs. Every college, hospital, and school in Dublin is represented in it; President of Royal College and Private Teacher, Demonstrator and Professor, meet here on equal terms. The only qualification for welcome admission is to be a *bonâ fide* worker in some department of medicine, general or special. The result of the harmonious co-operation of all—*quisque in suâ arte*—is the mutual benefit and instruction of each of the members of the B.C., as it is familiarly called. I remember no instance, nor have I ever heard of any personal unpleasantness arising out of a meeting of the Biological Club. It is a significant fact that, among its extensive body of rules there is not one dealing with the expulsion of a member. Had there ever been any need for such a rule, it could and would have been quickly made. There are three ways in which a member can commit a Biological *suicide*, and get out of the club in a rapid manner—by Rule 13, being in arrears of his subscription for over 12 months; by Rule 19, the third failure to make his stated communication forfeits membership; and by Rule 21, insufficient attendance without valid excuse. This last rule is the saw which removes any decaying branches before the canker can spread to the main stem.

It now only remains for me to apologise for such a prolonged trespass on the attention of many to whom the details of the distant past may be rather uninteresting, and who would perhaps have been much better pleased had I, following the example of Stewart Woodhouse, bottled up this dry communication, and paid the penalty for doing so by a dozen of champagne.

List of past and present Members of the Dublin Biological Club.

[Originals in Italics.]

	DATE OF ELECTION.	
Abraham, P. S.	Oct. 21, '79	Hon. member.
Bagot, W.	Nov. 4, '90.	
Baker, A. W.	Oct. 30, '83.	
Ball, C. B.	Oct. 21, '79	Sec. Oct. 28, '79; Treas. Oct. 2, '83
Battersby, W. E.	April 5, '72	Erased Oct. '72.
Beatty, W.	Oct. 26, '86.	
Bennett, E. H.	Jan. 6, '72.	
Benson, A.	Oct., '85.	
Bewley, H. T.	Oct. 26, '86.	
Blackhall	Dec. 12, '76	Resigned.
Bookey, R.	Feb. 3, '74	Died Jan. '80.
Clarke, J. A.	Jan. 6, '72	Hon. Member.
Collins, E. W.	Jan. 6, '72	Hon. Member.
Coppinger, C.	Mar. 24, '74	Rule XXI.
Corley, A. H.	Feb. 3, '72	Died Dec. 1, '90.
Cruise, F. R.	1876	Resigned.
Cunningham, D.	Nov. 7, '82	Resigned, Oct. 15, '89.
Drury, H.	Nov. 3, '91.	
Duffey, G. F.	Jan. 6, '72.	
Earl, H. C.	Oct. 22, '89.	
Fitzgerald, C. E.	Jan. 6, '72	Resigned.
Fitzgibbon, H.	July 8, '73.	
Foot, A. W.	Jan. 6, '72.	
Franks, K.	Dec. 12, '76.	
Gordon, S.	Mar. 24, '74	Rule XXI.
Gunn, Christopher	1878	Resigned, Oct. 7, '79.
Harvey, R. J.	Jan. 6, '72	Died Dec. 28, '81.
Haughton, Rev. S.	Nov. 30, '75	Rule XXI.
Hayes, Richd.	Feb. 17, '80.	
Hayes, Pat	Oct. 12, '80	Rule XXI.
Heuston, F. T.	Feb. 2, '92.	
Kane	Dec. 16, '73	Resigned.
Lentaigne, J. V.	Oct. 14, '84.	
Little, James	July 29, '73.	
Little, Thos. E.	Jan. 6, '72	Died Nov. 10, 1891.
Macalister, A.	Feb. 17, '80	Resigned.
Macan, A. V.	Dec. 13, '72.	
M'Kee, A.	Oct. 26, '86	Resigned, Oct. 14, '90.
M'Donnell, R.	Jan. 20, '72	Died May 6, '89.
M'Dowel, B. G.	Feb. 3, '72	Died Sept. 15, '75.
Moore, J. W.	Jan. 6, '72	Resigned.
Neville, W.	Nov. 8, '81	Rule XXI., Oct. 9, '88.
Nixon, C. J.	Feb. 3, '74	Sec. '75–'78; Treas. '79–'82.

	Date of Election.	
Norman, C.		
Nugent, G. P.	Oct. 12, '80	Sec. '86-'92.
Patteson, R. G.	Oct. 22, '89.	
Peele, Edw.	May 4, '75	Died Feb. 18, 1881.
Purser, J. M.	Jan. 6, '72.	
Rainsford, Rd.	Jan. 6, '72	Died Feb. 17, 1880.
Redmond, D.	Oct. 21, '79.	
Redmond, J. M.	Feb. 2, '92.	
Scott, J. A.	1888.	
Smith, W. G.	April 5, '72	Resigned; re-elected Feb. 7, '82.
Smyly, W. J.	Nov. 7, '82.	
Stack, Theod.	July 1, '73	Resigned, Oct. 5, '86.
Stoker, W. T.	April 19, '72.	
Stokes, Sir Wm.	Jan. 29, '84.	
Story, J. B.	1879.	
Swanzy, H. R.	Jan. 6, '72.	
Thomson, W.	Dec. 13, '72	Resigned, 1891.
Tobin, R.	Mar. 24, '91	
Todhunter, J.	Jan. 6, '72	Hon. Member.
Wilson, H.	Feb. 3, '72	Died June, 1877.
Woodhouse, S.	Dec. 12, '76	Resigned.
Wright, W. M.	Nov. 8, '81.	
Yeo, G. F.	Jan. 6, '72	Hon. Member, 1875; Sec. and Treas., 1874-76.

THE BROOKLYN MEDICAL JOURNAL.

This monthly is in its sixth year, but we do not remember to have reviewed a specimen before. The November (1891) issue is before us—64 8vo. pages of professional matter, with a dense integument of advertisements. There are four original articles—one devoted to that obsolescent subject, Dr. Koch's lymph. A section is devoted to Progress in Medicine under eight heads, each in charge of a distinct reporter. From the vital statistics for July we take the following figures:—The estimated population of Brooklyn was 862,155. 2,316 deaths in July give an annual mortality, the report states, of 31·38 per 1,000. For comparison we have the annual mortality of eight other large cities deduced from July death-rate as follows:—New York, 32·85; Philadelphia, 24·18; Berlin, 18·76; Vienna, 25·18; Paris, 20·57; London, 19·76; Glasgow, 23·74; Dublin, 31·93. 52 deaths were due to "violence." Total deaths under 5 years were 1,466, under one year 1,126.

SALICYLIC ACID IN CERTAIN FORMS OF CYSTITIS.

Dr. J. P. Bryson says (*Medical News*, Philadelphia, September 26, 1891) that he uses ℥i of a 2 per cent. solution of salicylic acid in glycerine with ℥v of water for washing out the bladders of patients with chronic exudative cystitis. It succeeds when borax fails.

SANITARY AND METEOROLOGICAL NOTES.

Compiled by J. W. Moore, B.A., M.D., Univ. Dubl.; F.R.C.P.I.;
F. R. Met. Soc.; Diplomate in State Medicine and ex-Sch. Trin. Coll. Dubl.

Vital Statistics

For four Weeks ending Saturday, March 26, 1892.

The deaths registered in each of the four weeks in the sixteen principal Town Districts of Ireland, alphabetically arranged, corresponded to the following annual rates per 1,000:—

Towns	Weeks ending				Towns	Weeks ending			
	March 5.	March 12.	March 19.	March 26.		March 5.	March 12.	March 19.	March 26.
Armagh -	0·0	14·0	21·0	35·0	Limerick -	19·6	25·3	35·1	35·1
Belfast -	33·4	32·8	34·4	27·1	Lisburn -	38·5	12·8	21·4	30·0
Cork -	38·1	30·4	21·5	37·4	Londonderry	18·8	15·7	18·8	20·4
Drogheda	52·7	65·9	22·0	35·1	Lurgan -	22·8	27·4	36·5	31·9
Dublin -	31·5	34·0	35·9	39·1	Newry -	20·1	36·2	16·1	25·2
Dundalk -	25·1	0·0	20·9	29·3	Sligo -	61·9	10·3	25·8	10·3
Galway -	37·8	41·6	22·7	49·1	Waterford -	42·5	15·0	30·0	20·0
Kilkenny	33·0	51·9	47·2	33·0	Wexford -	9·0	27·1	22·6	40·6

In the week ending Saturday, March 5, 1892, the mortality in thirty-three large English towns, including London (in which the rate was 18·9), was equal to an average annual death-rate of 20·5 per 1,000 persons living. The average rate for eight principal towns of Scotland was 22·5 per 1,000. In Glasgow the rate was 24·9, and in Edinburgh it was 17·3.

The average annual death-rate represented by the deaths registered during the week in the sixteen principal town districts of Ireland was 31·2 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·5 per 1,000, the rates varying from 0·0 in seven of the districts to 5·2 in Sligo—the 12 deaths from all causes registered in that district comprising 1 from diarrhœa. Among the 164 deaths from all causes registered in Belfast are 2 from measles, 2 from scarlatina, 3 from whooping-cough, 1 from diphtheria, 1 from simple continued fever, 1 from enteric fever, 4 from diarrhœa, 26 from phthisis, and 37 from diseases of the respiratory system. The 55 deaths in Cork comprise 1 from typhus, 2 from whooping-cough, 9 from phthisis, and 15 from diseases of the respiratory system.

In the Dublin Registration District the registered births amounted to 224—123 boys and 101 girls; and the registered deaths to 219—109 males and 110 females.

The deaths, which are 13 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 32·7 in every 1,000 of the population. Omitting the deaths (numbering 8) of persons admitted into public institutions from localities outside the district, the rate was 31·5 per 1,000. During the first nine weeks of the current year the death-rate averaged 38·8, and was 6·1 over the mean rate in the corresponding period of the ten years 1882–1891.

Thirty-five deaths from zymotic diseases were registered, being 1 over the number for the preceding week, and 12 in excess of the average for the ninth week of the last ten years. They comprise 7 from measles, 8 from influenza and its complications, 8 from whooping-cough, 4 from enteric fever, 1 from diarrhœa, and 1 from dysentery.

The number of cases of enteric fever admitted to hospital is 8, being a decline of 8 as compared with the admissions for the preceding week, but 3 over the number for the week ended February 20. Eight enteric fever patients were discharged, and 65 remained under treatment on Saturday, being equal to the number in hospital at the close of the preceding week.

Eighteen cases of measles were admitted to hospital against 10 for the preceding week. Thirty-one cases of this disease remained under treatment in hospital at the close of the week.

The hospital admissions for the week include, also, 4 cases of scarlatina and 1 case of typhus. Nine cases of the former and 2 of the latter disease remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had risen from 61 for the week ended February 20, to 65 for the following week, fell to 44, or 6 under the average for the corresponding week of the last ten years. They comprise 30 from bronchitis, 11 from pneumonia or inflammation of the lungs, and 1 from pleurisy.

In the week ending Saturday, March 12, the mortality in thirty-three large English towns, including London (in which the rate was 22·1), was equal to an average annual death-rate of 22·9 per 1,000 persons living. The average rate for eight principal towns of Scotland was 22·6 per 1,000. In Glasgow the rate was 25·7, and in Edinburgh it was 17·9.

The average annual death-rate in the sixteen principal town districts of Ireland was 31·3 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·4 per 1,000, the rates varying from 0·0 in nine of the districts to 8·8 in Drogheda—the 15 deaths from all causes registered in that district comprising 2 from enteric fever. Among the 161 deaths from all causes registered in Belfast are 5 from measles, 2 from scarlatina, 4 from whooping-cough, 1 from diphtheria, 2 from enteric fever, 1 from diarrhœa, 26 from phthisis, and 45 from diseases of the respiratory system. The 18 deaths in Limerick comprise 1 from typhus and 1 from whooping-cough. The Registrar of Waterford No. 1 District specially reports 1 death from influenza.

In the Dublin Registration District the registered births amounted to 207—109 boys and 98 girls; and the registered deaths to 238—125 males and 113 females.

The deaths, which are 15 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 35·5 in every 1,000 of the population. Omitting the deaths (numbering 10) of persons admitted into public institutions from localities outside the district, the rate was 34·0 per 1,000. During the first ten weeks of the current year the death-rate averaged 38·5, and was 5·7 over the mean rate in the corresponding period of the ten years 1882–1891.

The number of deaths from zymotic diseases registered is 32, being 6 over the average for the corresponding week of the last ten years, but 3 under the number for the week ended March 5. The 32 deaths comprise 12 from measles (against 7 from that disease for the preceding week), 9 from influenza and its complications, 6 from whooping-cough (being 2 under the number from that cause in each of the two weeks preceding), 1 from diarrhœa, 1 from dysentery, and 1 from erysipelas.

Nine cases of enteric fever were admitted to hospital, being 1 in excess of the admissions for the preceding week, but 7 under the number for the week ended February 27. Thirteen enteric fever patients were discharged, and 61 remained under treatment on Saturday, being 4 under the number in hospital on Saturday, March 5.

Twenty-eight cases of measles were admitted to hospital against 1 for the preceding week, and 10 for the week ended February 27. Six patients were discharged, 2 died, and 51 remained under treatment on Saturday, being 20 in excess of the number in hospital at the close of the preceding week.

The hospital admissions for the week include, also, 1 case of typhus and 3 cases of scarlatina. Three cases of the former and 12 of the latter disease remained under treatment in hospital on Saturday.

Fifty-six deaths from diseases of the respiratory system were registered, being 1 over the average for the corresponding week of the last ten years, and 12 over the number for the week ended March 5. They comprise 39 from bronchitis and 12 from pneumonia or inflammation of the lungs.

In the week ending Saturday, March 19, the mortality in thirty-three large English towns, including London (in which the rate was 24·2), was equal to an average annual death-rate of 24·8 per 1,000 persons living. The average rate for eight principal towns of Scotland was 24·2 per 1,000. In Glasgow the rate was 28·8, and in Edinburgh it was 22·8.

The average annual death-rate represented by the deaths registered in the sixteen principal town districts of Ireland was 32·1 per 1,000 of the unrevised population based on the Census of 1891.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·6 per 1,000, the rates varying from 0·0 in eleven of the districts to 4·6 in Lurgan—the 8 deaths from all causes registered in that district comprising 1 from diarrhœa. Among the 169 deaths from all causes registered in Belfast are 12 from measles, 4 from whooping-cough, 1 from diphtheria, 1 from enteric fever, 27 from phthisis, and 46 from diseases of the respiratory system.

In the Dublin Registration District the registered births amounted to 184—96 boys and 88 girls; and the registered deaths to 247—136 males and 111 females.

The deaths, which are 37 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 36·8 in every 1,000 of the population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 35·9 per 1,000. During the first eleven weeks of the current year the death-rate averaged 38·4, and was 5·8 over the mean rate in the corresponding period of the ten years 1882–1891.

Thirty-nine deaths from zymotic diseases were registered, being 7 over the number for the preceding week and 17 in excess of the average for the eleventh week of the last ten years. They comprise 12 from measles (being equal to the number of deaths from that disease for the preceding week), 2 from scarlet fever (scarlatina), 6 from influenza and its complications, 5 from whooping-cough, 3 from enteric fever, and 2 from dysentery.

Only 3 cases of enteric fever were admitted to hospital, being a decline of 6 as compared with the admissions for the preceding week; 14 enteric fever patients were discharged, and 50 remained under treatment on Saturday, being 11 under the number in hospital on Saturday, March 12.

The number of cases of measles admitted to hospital is 21, being 7 under the admissions for the preceding week. Eight patients were discharged, and 64 remained under treatment on Saturday, being 13 over the number in hospital at the close of the preceding week.

The hospital admissions include, also, 4 cases of scarlatina, but no cases of typhus were received. Twelve cases of the former and 3 of the latter disease remained under treatment in hospital on Saturday.

The number of deaths from diseases of the respiratory system registered is 55, being 6 over the average for the corresponding week of the last ten years, but 1 under the number for the week ended March 12. The 55 deaths comprise 43 from bronchitis, and 9 from pneumonia or inflammation of the lungs.

In the week ending Saturday, March 26, the mortality in thirty-three large English towns, including London (in which the rate was 21·3), was equal to an average annual death-rate of 22·3 per 1,000 persons living. The average rate for eight principal towns of Scotland was 23·4 per 1,000. In Glasgow the rate was 26·2, and in Edinburgh it was 19·6.

The average annual death-rate in the sixteen principal town districts of Ireland was 33·3 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases registered in the sixteen districts were equal to an annual rate of 3·2 per 1,000, the rates varying from 0·0 in seven of the districts to 4·7 in Kilkenny—the 7 deaths from all causes registered in that district comprising 1 from diarrhœa. Among the 183 deaths from all causes registered in Belfast are 6 from measles, 1 from scarlatina, 2 from whooping-cough, 3 from diphtheria, 1 from simple continued fever, 5 from diarrhœa, 17 from phthisis, and 48 from diseases of the respiratory system.

In the Dublin Registration District the registered births amounted to 220—120 boys and 100 girls; and the registered deaths to 269—111 males and 158 females.

The deaths, which are 50 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 40·1 in every 1,000 of the population. Omitting the deaths (numbering 7) of persons admitted into public institutions from localities outside the district, the rate was 39·1 per 1,000. During the first twelve weeks of the current year the death-rate averaged 38·5, and was 5·8 over the mean rate in the corresponding period of the ten years 1882–1891.

The number of deaths from zymotic diseases registered is 39, being equal to the number for the preceding week and 15 in excess of the average for the twelfth week of the last ten years. The 39 deaths comprise 22 from measles (being 10 over the number of deaths from that disease in each of the two weeks preceding), 6 from influenza and its complications, 5 from whooping-cough, 1 from enteric fever, 2 from diarrhœa, and 1 from dysentery.

The cases of measles admitted to hospital amounted to 48, against 21 for the preceding week and 28 for the week ended March 12. Ten measles patients were discharged, 2 died, and 100 remained under treatment on Saturday, being 36 over the number in hospital at the close of the preceding week.

As in the week preceding, there were but 3 cases of enteric fever admitted to hospital; 6 enteric fever patients were discharged, and 47 remained under treatment on Saturday, being 3 under the number in hospital on Saturday, March 19.

No cases of either scarlatina or typhus were received. Twelve cases of the former and 3 of the latter disease remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system amount to 63, or 10 in excess of the average for the corresponding week of the last ten years and 8 over the number for the week ended March 19. They comprise 44 from bronchitis and 11 from pneumonia or inflammation of the lungs.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ *N. Long.* 6° 15′ *W., for the Month of March,* 1892.

Mean Height of Barometer, - - -	30·057 inches.
Maximal Height of Barometer (on 22nd, at 9 p.m.),	30·687 „
Minimal Height of Barometer (on 15th, at 1 p.m.)	29·138 „
Mean Dry-bulb Temperature, - - -	37·8°.
Mean Wet-bulb Temperature, - - -	35·7°.
Mean Dew-point Temperature, - - -	32·2°.
Mean Elastic Force (Tension) of Aqueous Vapour, -	·187 inch.
Mean Humidity, - - - - -	80·2 per cent.
Highest Temperature in Shade (on 17th) - -	59·2°.
Lowest Temperature in Shade (on 11th), - -	23·8°.
Lowest Temperature on Grass (Radiation) (on 11th),	16·9°.
Mean Amount of Cloud, - - - -	53·4 per cent.
Rainfall (on 9 days), - - - -	·991 inch.
Greatest Daily Rainfall (on 14th), - - -	·400 inch.
General Directions of Wind, - - -	E., N.W., N.E.

Remarks.

A remarkably cold, dry month, with scanty rainfall and a great prevalence of searching winds from polar quarters. The arithmetical mean temperature was only 39·1°, or 2·2° below that of February. The rainfall did not amount quite to an inch and was distributed over only 9 days. The week ending Saturday, the 12th, was the coldest experienced in Dublin during the winter of 1891–92, and had it not been for a temporary rise of the thermometer to 55·7° on the 31st, the month would have proved the coldest March on record in Dublin within the past thirty years at least. The amount of cloud was only 45·5 per cent. at 9 p.m., so that radiation by night was very active.

In Dublin the arithmetical mean temperature (39·1°) was considerably below the average (43·1°); the mean dry bulb readings at 9 a.m. and 9 p.m. were 37·8°. In the twenty-seven years ending with 1891, March was coldest in 1867 and 1883 (M. T. = 39·0°), and warmest in 1868 (M. T. = 47·3°). In 1876 the M. T. was 41·1°, in 1879 (the cold year) it was 42·5°, in 1888 it was as low as 39·8°, in 1889 it was 44·0°, and in 1890 it was as high as 45·1°. In 1891, it was only 41·7°. As a general rule, February in Dublin is only a shade colder than March. This is due to the fact that the Continental anticyclone usually embraces the British Isles and Scandinavia in March, causing easterly winds. In the present year, however, February was actually 2·2° warmer than March.

The mean height of the barometer was 30·057 inches, or 0·141 inch above the corrected average value for March—namely, 29·916 inches. The mercury rose to 30·687 inches at 9 p.m. of the 22nd, and fell to 29·138 inches at 1 p.m. of the 15th. The observed range of atmospherical pressure was, therefore, 1·549 inches—that is, more than an inch and a half.

The mean temperature deduced from daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. was 37·8°, or 3·0° below the value for February, 1892. Using the formula, *Mean Temp.* = *Min.* + (*max.*—*min.* × ·485), the M. T. becomes 38·9°. The arithmetical mean of the maximal and minimal readings was 39·1°, compared with a twenty-five years' average of 43·1°. On the 17th the thermometer in the screen rose to 59·2°—wind, S.S.W.; on the 11th the temperature fell to 23·8°—wind, N.W. The minimum on the grass was 16·9°, also on the 11th.

The rainfall was only ·991 inch, distributed over only 9 days. The average rainfall for March in the twenty-five years, 1865–89, inclusive, was 2·061 inches, and the average number of rainy days was 16·5. The rainfall, therefore, was much below the average, while the rainy days were also much below it. In 1867 the rainfall in March was very large—4·972 inches on 22 days; in 1888, 3·753 inches fell on 18 days; in 1866 also 3·629 inches fell on 21 days. On the other hand, in 1871, only ·815 of an inch was measured on 12 days, and in 1874 only ·953 of an inch fell, also on 12 days. In 1887 (the "dry year"), 1·485 inches of rain fell on 15 days; in 1889, 1·076 inches fell on, however, as many as 17 days; in 1890 the fall was as much as 3·693 inches on 17 days; but in 1891 only ·936 of an inch fell on 16 days.

The atmosphere was thick with dry smoke fog in the city on the 4th, 6th, 7th, 12th, 20th, 21st, 24th, 29th, 30th, and 31st. High winds were noted on only 4 days, reaching the force of a gale on only one occasion.

the 18th. Snow or sleet occurred on the 2nd, 3rd, 9th, 10th, 13th, 14th, and 27th; and hail fell on the 1st, 2nd, 6th, 7th, 9th, 12th, 14th, 21st, 27th, and 28th. The temperature exceeded 50° in the screen on only 7 days, compared with 9 days in March, 1891, and 19 days in March, 1890; while it fell to or below 32° in the screen on as many as 16 nights, compared with 10 nights in March, 1891, and only 4 nights in March, 1890. The minima on the grass were 32°, or less, on 25 nights, compared with 20 nights in March, 1891, and 16 nights in March, 1890. On 9 days the thermometer did not rise to 40° in the screen.

Very cold weather and parching winds with frequent, although not heavy, falls of snow, were reported from all parts of the United Kingdom and from the Continent during the period ending Saturday, the 5th. Displays of aurora borealis were of frequent occurrence in Scotland and Scandinavia. The prevailing type of distribution of atmospherical pressure was anticyclonic in the north, cyclonic in the south. Hence easterly winds blew all over Central Europe and the British Islands. They were accompanied by dense clouds, and snow was in the air day after day, although the total fall did not yield a large rainfall measurement. On Wednesday and Thursday the thermometer did not rise above 32° all over the S.E. of England either by night or by day. In Dublin showers of sleety rain and hail fell on Tuesday, the 1st, and light snow was observed at frequent intervals on Wednesday and Thursday. On Friday evening the sky cleared temporarily, so that sharp frost set in. The clouds soon returned, however, but finally dispersed on Saturday afternoon, which proved fine and bright. In Dublin the barometer rose to 30·399 inches at 9 p.m. of Friday (wind, S.E.). On Tuesday the thermometers in the screen rose to 42·9°; on Friday they fell to 29·2°. The rainfall was ·034 inch on two days, nearly all of which fell as hail and snow. On Tuesday the measurement was ·028 inch. The wind blew constantly from points between N.E. and S., chiefly from E.

Extremely cold, winter-like weather held throughout the week ended Saturday, the 12th, the mean temperature of which in Dublin was lower than that of any other week during the past or rather current winter. At the beginning a large anticyclone stretched southwestwards from Scandinavia, across the North Sea and the British Islands, causing easterly winds and cold, but dry weather. At this time deep depressions were advancing over the Iberian Peninsula from the southward, and were accompanied in that region by high temperatures, heavy rains, and gales. On Tuesday, however, a brisk and decided fall of the barometer took place in the North also, as an extensive depression formed over the Norwegian Sea. This system enlarged and spread southwards down the North Sea, causing strong W. to N. and N.E. winds and considerable falls of hail and snow in the British Islands. On Wednesday night another well-marked cyclonic system travelled rapidly southeastwards across Scotland and England, renewing the storms of hail and snow. On Thursday night thunder and lightning occurred at Wick and Shields. Severe frost was reported from many stations on nearly every night during the week. On Friday the weather moderated in Ireland, but temperature remained very low generally. In Dublin the mean pressure was 29·792 inches, the barometer being observed to range from 30·182 inches on Sunday at 9 a.m. (wind, calm) to 29·426 inches on Thursday at 7 30 a.m. (wind, N.N.W.)—the reading had been lower about 6 a.m. The corrected mean temperature was 33·6°. The mean dry bulb readings at 9 a.m. and 9 p.m. were 32·2°. On Tuesday the screen thermometers rose to 44·4°, on Friday they fell to 23·8°, when also the minimum on the snow was 16·9°. The rainfall was ·215 inch, on three days. The precipitation was almost wholly in the form of snow and hail. The prevailing winds were N.W. and E.N.E.

The week ended Saturday, the 19th, is remarkable for a sudden bound from midwinter into spring. On Sunday morning the centre of a well-defined depression, which had crossed the Continent from Austria, was found over the North Sea off the coasts of Lincolnshire and Norfolk. The weather was very cold throughout the British Islands, and snow fell in many places. On Monday morning the same depression had advanced to Scotland, which country it covered completely, causing a continuance of wintry weather. At night the barometer fell fast as a new disturbance approached Ireland from the westward. The centre of this system passed in an easterly direction across St. George's Channel, South Wales, and central England to Holland, which it reached on Wednesday morning. It was accompanied by a decided rise of temperature and heavy rains in Ireland, England, and France, while the cold 'stiffened' in Scotland. On Wednesday morning the thermometer fell to 6° at Nairn, and even at 8 a.m. the temperature was only 13° at that station, compared with 51° at Valentia Island in Kerry. A new depression on Wednesday night caused a warm S.W. wind all over the British Islands, the thermometer rising 32° in 24 hours at Nairn. High day temperatures now set in, the thermometer recording 59° on Thursday in London and Dublin, as well as at Parsonstown and Cambridge. On Friday the maximum was in London 61°, at Leith 62°, and at Cambridge 63°. At this time it blew hard in Ireland from S.S.E., but the weather was in other respects chiefly fine. Saturday was a lovely spring-like day. In Dublin the mean atmospherical pressure was 29·736 inches, the barometer ranging between 29·138 inches at 1 p.m. of Tuesday and 30·129 inches at 9 a.m. of Saturday (wind on both occasions being about E.S.E). The corrected mean temperature was 43·9°, the mean dry bulb temperature at 9 a.m. and 9 p.m. was 42·9°. On Sunday the screened thermometers fell to 26·8°, on Thursday they rose to 59·2°. The rainfall was ·576 inch on two days, ·400 inch being referred to Monday. Snow fell on Sunday and Monday. The prevailing winds were S.W. and S.E. At the close of the week a vast anticyclone had spread all over northern and western Europe from Russia, where the barometer exceeded 31 inches.

During the week ended Saturday, the 26th, so far as Ireland is concerned, the weather was exceptionally fine and dry. The amount of cloud, however, was great, and temperature ruled rather low. At the beginning of the week an anticyclone, with central readings of the barometer above 30·8 inches, lay over the Baltic, while pressure was rather below 30 inches over the Bay of Biscay. An easterly wind consequently prevailed, but in Dublin dense cirri came up from W. in a higher air-current all day on Sunday. Next day the barometer rose steadily in Ireland and England as a new anticyclone spread in from the westward. This system developed until Wednesday, when the barometer rose to 30·76 inches at Belmullet, in Mayo. In Dublin a hail shower fell on Monday afternoon, Tuesday proved very fine, but early on Wednesday morning the sky became densely overcast, remaining so until Saturday. In this interval the anticyclone was dispersing, and an extreme reduction of pressure took place which was most decided over Northern Europe, so that at 8 a.m. of Saturday the barometer was as low as 28·75 inches at Bodö in Norway. Notwithstanding this and because the fall of the barometer was uniform and general, no very bad weather followed. In Dublin the mean height of the barometer was 30·253 inches, pressure ranging from 30·687 inches at 9 p.m. of Tuesday (wind, N.W.) to 29·640 inches at 4 p.m. of Saturday (wind, W.S.W.). The corrected mean temperature was 42·7°. The mean dry bulb readings at 9 a.m. and 9 p.m. were 42·2°. The screened thermometers rose to 51·5° on Monday and fell to 33·0° on Tuesday. The winds were light and variable, chiefly from polar quarters. The amount of cloud was 71·4 per cent. There was a considerable rainfall over south-eastern England on Monday and Tuesday, and snow fell in Scotland on Saturday, but in Dublin no measurable rainfall occurred until Saturday night, when ·143 inch of rain was registered.

The closing period of the month (27th–31st, inclusive) was again very cold, the night-frosts being particularly sharp. Owing, however, to the clearness of the sky and the continuous bright sunshine by day temperature showed a decided tendency to recover on the 30th and 31st. On the latter day the maximum was 55·7° in Dublin, but readings as high as 68° were recorded at York and Loughborough, and in Ireland the thermometer rose to 63° at Parsonstown and to 64° at Donaghadee. At the beginning of this period the Dublin mountains were deeply covered with snow. From the 28th an anticyclone stretched across Ireland and central England.

The rainfall in Dublin during the three months ending March 31st has amounted to 4·808 inches on 48 days, compared with only 1·650 inches on only 32 days during the same period in 1891, 7·470 inches on 45 days in 1890, 5·738 inches on 53 days in 1889, 6·097 inches on 41 days in 1888, and a twenty-five years' average of 6·411 inches on 51·0 days (1865–1889, inclusive).

At Knockdolian, Greystones, Co. Wicklow, only ·995 inch of rain fell on 9 days during March; and the total rainfall since January 1, 1892, equals 4·205 inches on 40 days.

PERISCOPE.

A CASE OF MYXŒDEMA SUCCESSFULLY TREATED BY MASSAGE AND HYPODERMIC INJECTIONS OF THE THYROID GLAND OF A SHEEP.

DR. WALLACE BEATTY, Senior Assistant Physician to the Adelaide Hospital, Dublin, writes as follows in the *British Medical Journal*, March 12, 1892:—"On October 7, 1891, a married lady, aged forty-five, the mother of several children, came to consult me. I had heard a few days previously from a friend of hers that her ill-health had existed for about five or six years, and that the symptoms had been steadily progressive. Naturally an active, bright, sweet-tempered woman, quick in articulation, and possessed of an excellent memory, she became gradually more and more easily tired, and suffered from lassitude; her speech became slow; her memory impaired; her temper irritable and easily ruffled by trivial causes; she found walking difficult; constipation, which had always been a trouble, became more so; she suffered much from cold.

"On examination of the patient it was quite clear that she was suffering from myxœdema. Her face was swollen, waxy-looking, and anæmic; there was a well-marked and circumscribed pink flush on her cheeks, contrasting markedly with the pale, swollen skin of the rest of the face. The eyelids were swollen, and looked œdematous. The alæ nasi were thickened and the nose broadened. The lips were thickened, and the tongue seemed too large for her mouth, and evidently interfered somewhat with articulation. The mucous membrane of the oral cavity had a pale, swollen appearance. The hands were enlarged and clumsy; her rings, which at one time had been loose, were now too tight for her finger, and could not be removed. The feet were enlarged; the skin of the feet and legs seemed thickened, and there was some œdema present. No trace of the thyroid gland could be made out. There was no fulness above the outer half of each clavicle, such as is often present in myxœdema. Her heart sounds were normal; the pulse was slow and feeble. The urine was free from albumen and sugar. Her hair had become thin. Menstruation had become irregular, having occurred only three times since October, 1890, the last period having come about a week before I saw her. The account she gave of herself was very much the same as that given to me by her friend. She told me that she had taken various tonics, and had been at Homburg, where she had taken steel 'both inside and outside.'

"I need hardly say that I could not hold out much hope that any treatment would succeed; still, as I had read that some cases of myxœdema were fairly curable by massage, I suggested that a consultation should be held with a view to the consideration of this treatment. Dr. Head was asked to see her. He confirmed my diagnosis, and considered that a thorough course of massage ought to be tried. Accordingly, on October 21 she went into a private hospital, and treatment was commenced. On October 24 I asked Dr. Purser to see her and to examine er blood. He agreed with Dr. Head and me that there could be no oubt as to the nature of the case. He examined her blood, and found he percentage of hæmoglobin to be 70 per cent. of the normal. Dr. Head, r. Purser, and I, about this time, discussed the advisability of adopting e treatment which had been used by Dr. George R. Murray, of wcastle-on-Tyne, with considerable success—namely, the hypodermic jection of an extract of the thyroid gland of a sheep.[a] We decided to rsue the treatment by massage alone for five or six weeks, and then, no decided improvement had taken place in her condition, to adopt r. Murray's treatment.

"Dr. Purser made a second examination of the blood on November 27—at is, five weeks after his first examination; he found the percentage hæmoglobin to be 75. In the second week of December there was no oubt that an improvement had taken place in the patient's condition—e face was less swollen, the hands were somewhat less clumsy, the rings re looser, the pulse had improved, menstruation had occurred twice nce her admission to the hospital (on November 18 and on December 7), d was natural in its character; the masseuse, who had found great fficulty in pinching up the thickened skin at the commencement of the atment, had no longer this difficulty to deal with, at least to the same tent. Still the improvement was not sufficient to lead us to hope that prolonged course of massage would effect even a partial cure. Accordgly we determined, while continuing the massage treatment, to give ypodermic injections of a sheep's thyroid gland. Dr. Purser kindly de the first extract for me, and gave the first injection; this was ven on December 11—that is, on the fifty-first day of the massage atment. The extract was made according to the directions given by r. Murray, with one or two unimportant modifications. The method dopted was as follows:—

"The lobes of the thyroid gland of a sheep were removed immediately ter it was killed, the instruments used having been rendered aseptic. surrounding fat and connective tissue were removed from the lobes.

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[a] British Medical Journal, October 10, 1891.

Each lobe was cut up into small pieces on a glass dish, the glass dis having been previously washed with a 1 in 20 solution of carbolic aci The pieces were put into two sterilised test tubes, one for each gland, an over them was poured, in sufficient quantity to cover them, a solutio containing a ½ per cent. solution of carbolic acid and glycerine in equa part. The test tubes were left in a cool place for twenty-four hours The contents were then strained through fine muslin into a glass-stoppere bottle, and the muslin squeezed so as to express as much liquid as possibl the muslin was previously placed for a few minutes in boiling distille water, and the bottle was also previously disinfected.

"The extract so prepared from the two lobes of one thyroid gland wa given in three parts, with two days' interval between. The patien experienced no unpleasant sensations. I have continued the injection and have given up to the present (February 13th, 1892) the extracts o five thyroid glands. Each extract I have given in three separate inje tions within a week after its preparation. The time between th administration of each set of injections has varied from four to ten day

"The effect of the injections has been really marvellous. A marke improvement in the patient's condition was noticeable within one wee so much so that her husband, who saw her on December 15th for th first time since her admission to the hospital, was delighted with th change in his wife's condition. He told me that he could not hav believed the change possible. She left the hospital on December 16t and returned home. Massage was continued for seven weeks longe the patient, however, being permitted to go about the house, and to tal short walks daily out-of-doors.

"The improvement has steadily progressed. Now she is practical cured—the face looks natural, the skin of the face is now no long thickened, but is thin and wrinkled; the eyelids are not swollen; the li are natural; the tongue is of natural size; speech is rapid and easy; th hands are no longer clumsy, she can give a hearty and firm 'shak hands;' her rings are loose and easily removable; her movements a active; her hair, which had become thin, is now growing thickly; h memory has returned; menstruation is natural. No physician, seeing h now for the first time, could recognise the case as one of myxœdema."

THE LATE DR. D. HAYES AGNEW OF PHILADELPHIA.

THE following Minute on the death of Dr. D. Hayes Agnew was adopt by the College of Physicians of Philadelphia, on March 24, 1892:- "The death of Dr. D. Hayes Agnew, recently President of the Colle in the seventy-fourth year of his age, and after a life crowned wi honour and usefulness, calls for an expression of the sense entertained b the College of the gravity of the loss which it suffers, in common wi the profession he adorned, the charitable institutions he served, an the community in which his skill did so much to lessen suffering and death.

"He began his professional life with no adventitious aids; yet, by incessant industry, indomitable perseverance, and singleness of purpose, he attained to its highest rank. No temptation distracted his attention from the goal of his life—neither extraneous science, nor general literature, nor the allurements of art, nor the pleasures of society.

"The undivided strength of his mind and his affections were devoted to enlarging the domain of surgery, not only in its operative methods—which he always subordinated to the welfare of his patients—but also in preparing for his profession a literary monument that might speak for him when his voice should be no longer heard.

"His minute acquaintance with anatomy and his ambidextrous skill enabled him to perform, with ease to himself and safety to his patients, operations which less accomplished surgeons hesitated to undertake.

"He possessed a certain magnetism of manner, quite independent of formality, that evidently proceeded from the heart, and drew all hearts to himself. Never frivolous, but always cheerful, he was dignified, grave and earnest, making all who heard him as a teacher and speaker, or in familiar intercourse, recognise in him, above all other things, the upright man. For he possessed eloquence of conviction and the force of absolute honesty in all his statements, and thereby drew to himself, as enthusiastic admirers and disciples, the successive classes of students whom he taught.

"The College—desiring to show respect for the purity, uprightness, unselfishness, and modesty of Dr. Agnew's character; its admiration for the noble example of his life; and its sense of the value of his contributions to the science and art of surgery—directs that this Minute shall be duly recorded, and a copy of it, signed by the President and Secretary, be conveyed to Dr. Agnew's family. Also, that the College will attend the funeral in a body, and that the President be requested to appoint a fellow to prepare a memoir of our late colleague."

EXCISION OF APEX OF LUNG.

This heroic operation is reported, the *N. Y. Medical Record* informs us, in *La Gazetta Medica di Granada.* Dr. Tuffieri exhibited his patient, cured, before the Surgical Society. Having satisfied himself by preliminary experiments on lower animals, that the operation might be performed with safety, he cut "through skin and some fibres of the pectoralis major, laid bare the intercostal muscles of the second intercostal space, and exposed the parietal layers of the pleura, which he detached from the thoracic parietes. Opening the pleura, he found the lung apex studded with tubercle and slightly shrunken. Round the apex he passed a ligature, which he attached to the second rib, and then excised five centimetres of the tuberculous mass."

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

Caffyn's Jelly-Carnis and Carnis Suppositories.

On more than one occasion we have spoken in terms of approbation of the preparations of the Liquor Carnis Company. Of the nutritive and restorative value of the preparation from which the Company takes its name, a signal instance has recently come under our notice. A little boy, aged three years, was attacked with catarrhal pneumonia while passing through whooping-cough. He remained seriously ill for several days, when he was ordered a teaspoonful of the "Liquor Carnis" every three hours. He took to it kindly, and in a very short time showed a marked improvement in looks and strength. He soon began to take food, against which he had completely turned, and made a quick recovery.

The Company have lately introduced two new preparations, each useful in its own way. One of these is the "Jelly-Carnis," for which it is claimed that it represents a highly nourishing, stimulating, and palatable food and tonic, containing carbon for heat production and nitrogenous compounds for the nutrition of the tissues in proper proportions, and free from all irritating qualities. Experiments show that gelatine, while not itself a food-stuff capable of supporting life or of replacing albumen in tissue growth and repair, is an albumen-sparing substance, and is readily digested. There is evidence that it is an economical addition to proteid food-stuffs. The "Jelly-Carnis" contains 66 per cent. of Caffyn's liquor carnis. Its sweet taste is, doubtless, due to the presence of glycerine, and it is flavoured with celery. It may be eaten cold or taken in soup in the proportion of a dessertspoonful every hour for an adult.

The other novel preparation is the suppository, which contains the equivalent of two drachms of the liquor carnis. It is prepared by a special process in which the muscle-plasma (myosin, &c.) is entirely unchanged, and its assimilative properties are unimpaired. Gelatine is the colloid medium used in the preparation of the carnis suppository, one or two of which may be administered every three hours in cases where rectal feeding is indicated owing to organic disease of the œsophagus or stomach.

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PART I.
ORIGINAL COMMUNICATIONS.

ART. XIX.—*Rhinoscleroma.*[a] By W. G. T. STORY, M.B.; Clinical Assistant in St. Mark's Ophthalmic Hospital, Dublin.

THE disease known as Rhinoscleroma was first described by Hebra in 1870. In the cases seen by him the nose and adjacent parts, more especially round the external orifices of the nose, were swollen and infiltrated and very hard to the touch, and it was owing to this feature that the name Rhinoscleroma was given to it by Hebra, who supposed that it was of a sarcomatous nature. Since then, however, numerous other cases have been seen and described in Austria, Russia, Germany, Italy, and in Central America; and it has been found that the nose is not always either the starting-point or the seat of the disease.

The usual course of the disease is as follows:—After a history of long-standing nasal catarrh, accompanied in some cases by a tendency to bleeding, a chronic hypertrophic inflammation of the mucous membrane is observed; this generally commences at the choanæ, and may spread thence towards the anterior nares, the lips and gums, causing all these parts to become swollen and hard, or may spread downwards to the soft palate, pillars of the fauces, pharynx and larynx.

The parts attacked become greatly swollen, darker in colour than the surrounding healthy mucous membrane, and very hard to the touch; after a time nodules, also very hard and some of them as large as a hazel nut, develop on the surface of the swelling, and on these or between them superficial loss of substance may occur, but deep ulceration is almost never seen. The swellings are not painful, but by their size may cause in the nose difficulty of breathing, loss of smell, and blocking of the Eustachian tubes, with consequent deafness and tinnitus; in the lips, mouth, and pharynx difficulties in mastication and deglutition, and in the larynx persistent cough, aphonia, and attacks of dyspnœa, which are the more frequent, as the swellings give off a very sticky secretion which tends to form plugs and crusts; this is the stage of infiltration; it is followed by one of cicatricial contraction, when the swellings disappear and are replaced by cicatricial tissue, at first also very hard but becoming later more fibrous and greatly inclined to contract. This contraction may also cause severe symptoms, more especially stenosis of the larynx and trachea; like the swellings, the cicatricial tissue is covered with smooth thickened epithelium. The conversion into cicatricial tissue commences in the parts first attacked, so that in an old case it is often found to have taken place in the more central parts, while fresh nodules of infiltration are still appearing at the periphery. The disease is very chronic in its course; it is generally seen in young adults, though cases have been observed in children and in old persons; except indirectly it does not seem to affect the general health.

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[a] Read before the Section of Pathology of the Royal Academy of Medicine in Ireland, Friday, April 1, 1892.

Medicinal treatment has been of no avail, and what would seem the most rational method of cure—that is to say, complete removal of the diseased tissues—is so difficult to carry out that I do not know that there has been any quite successful case published; the diseased tissue, though so hard, is surprisingly easy to cut, and the wounds made heal very readily; but it is very hard to get away all the diseased parts, and foci of infection are generally left from which the process may start afresh. Treatment is therefore, to a large extent, palliative: the most important complication—stenosis of the glottis or trachea—being treated by dilatation with bougies or by tracheotomy.

The pathological changes consist in an infiltration of the mucous and submucous tissues with small round cells and spindle cells; among these are to be found a number of large round cells, which have a blown-out appearance, and are named after the observer who first described them—the cells of Mikulicz; the papillæ are enlarged and the epithelium thickened. In iseased parts the small-celled infiltration is replaced by dense nnective tissue, and the cells of Mikulicz are very scarce, but nall masses of so-called hyalin material, very retentive of iline stains, are to be found, and these are believed by most servers to be a degeneration product of the cells of Mikulicz.

In 1882 Frisch discovered that small bacilli were nearly always esent in the cells of Mikulicz and also lying outside them; he as able to make cultivations of these bacilli, but his inoculation periments were without result. Later, Cornil and Alvarez, nd after them Paltauf, and v. Eiselsberg in Vienna, noticed hat when stained in certain ways each bacillus might be seen be surrounded by a capsule of what they supposed to be a uid material—for instance, when carbol fuchsin was the stain d the capsules were visible, but when Löffler's methylene e was used the capsules were unstained, and the bacilli oked therefore much smaller. The bacilli are for the most t contained in the cells of Mikulicz; in these cells a nucleus y often be seen lying at the periphery, as if it had been shed to one side by the contents of the cell. These bacilli re successfully cultivated in six cases of typical rhinoscleroma Dr. Paltauf in 1885; the cases were typical of the disease as cribed by Hebra, as the nose and external nasal orifices were olved; drops of blood or exudation were taken from cuts de in the tumours with the usual precautions, and pure ltures were obtained on gelatine plates and tubes, on agar- ar and potato. On the plates they appeared, after a couple days, as small round white colonies as large as the head of a , and in gelatine tubes in which "Stich-kulturen" were de they took the form of a nail—in fact, were typical "Nagel- turen;" they did not liquefy the gelatine. On agar-agar the nies appeared more rapidly as white translucent masses, ut 5 mm. in breadth, and on potato they appeared as a am-like layer, which spread gradually from the point of ulation. Under the microscope the cultures were found to made up of short rod-like bacilli with capsules which could stained, and of cocci, chiefly diplococci, also with capsules. ese micro-organisms resembled therefore exactly those seen the tissues. They resembled also in a remarkable way, both their method of growth and in their appearance, the bacilli hich had been described by Friedländer as the cause of acute oupous pneumonia.

With these pure cultures inoculation experiments were made and control inoculations were made with Friedländer's bacillus The results in each case were very similar—that is to say, that i mice and guinea-pigs inflammation of the pleura and death coul be caused, and also local abscesses in the subcutaneous and muscular tissues, but no process resembling rhinoscleroma in man. Th rhinoscleroma bacilli were markedly less virulent than Friedländer's bacillus. Rabbits were not affected by either bacillus.

Last year Drs. Paltauf and v. Eiselsberg published 15 more cases in which they have successfully made pure cultures of th bacilli; this makes 42 published cases in which this has been don and this large number—considering the small number of cases o the disease observed, that in all the cases tried cultivations cou be made, and that the bacillus could be always found in harden sections—may be considered conclusive evidence that the micr organism is the cause of the disease.

Of these last 15 cases only one was a typical case of the rhin scleroma of Hebra—that is to say, with hardening of the extern parts of the nose, infiltration of the alæ nasi, and swellings of th external nasal orifices without ulceration.

In 2 of the cases there was ulceration, which is rare in rhin scleroma, and in both these it was believed that the ulcerati was, if not caused, at least rendered worse by the antisyphili treatment, both local and constitutional, to which, owing to mi taken diagnosis, the patients were subjected.

In 5 of the cases the disease never spread to the external orific of the nose, though the nasal mucous membrane was attacked.

In 7 cases the disease was primary in the larynx or trach appearing there as the chorditis vocalis inferior hypertroph described by Gerhardt; in 3 of these, bacilli in the cells of Mikuli were found; in the other 4 and in 5 other cases where the lar was involved, no tissue could be got for microscopical examinati though the clinical observations left no doubt as to the natur the disease.

In 3 cases of suspected rhinoscleroma cultivation experime gave a negative result, which was confirmed by events—the tumo disappearing under antisyphilitic treatment in one case, and in t others turning out to be of a tubercular and of a carcinomat nature respectively. Dr. Paltauf concludes, therefore, that cu vation experiments are of great diagnostic value, and in doubt cases conclusive for or against the nature of the disease.

As to the relationship of the bacillus of rhinoscleroma to that escribed by Friedländer as the bacillus of croupous pneumonia, it was found that there were points of difference in the cultures:—

1. In tubes containing 1 per cent. of grape sugar, Friedländer's acillus caused fermentation and complete disappearance of the ugar in 12 days, whereas the bacillus of rhinoscleroma only caused 6 per cent. of the sugar to disappear.
2. Friedländer's bacillus will grow in an acid medium; the other will not.
3. Friedländer's bacillus will coagulate milk, whereas that of hinoscleroma will not do so.

The bacilli, therefore, though closely allied, are not the same.

I should mention that Dr. Paltauf follows v. Ganghofer in iving up the term rhinoscleroma, as the disease has been shown ot to be confined to the nose, and uses instead the expression cleroma of the throat, larynx or nose.

The sections on the table were given to me in Dr. Paltauf's boratory. The first was stained in hæmotoxylin (Grenacher's), nd in it the capsules surrounding the bacilli are so deeply stained hat they are not transparent, and the bacilli therefore look large nd are easily seen lying inside the large spheroidal cells of Mikulicz.

Under the second microscope is a section from the same specimen ained in carbol fuchsin. In this section the bacilli lying also in e cells of Mikulicz can be seen, but they look smaller: the reason f this is that the capsule is so faintly stained as to be almost nvisible, and the small bacilli are seen lying inside it.

These large bacilli holding cells are quite typical of the disease; ey are not, as far as I know, seen in any other condition.

RT. XX.—*On Epistaxis and the Hæmorrhoidal Flux: their Pathogenic Unity and Identity of Cure.*[a] By ALEXANDER HARKIN, M.D., F.R.C.S.; Consulting Physician, Mater Infirmorum Hospital, Belfast; Membre de la Société Française d'Hygiéne, Paris.

o the ordinary observer it may not appear that there exists any tiological or pathological affinity between these two prominent amples of the hæmorrhagic habit; yet, on closer inquiry, it will found that they are intimately allied in pathogenic origin, in their general behaviour, and in the measures necessary for their treatment and effectual cure. Often, on the suppression of an habitual discharge, one or other of these emunctories acts vicariously, thus supplying the deficiency; and it is not at all uncommon for the pituitary membrane at the upper end of the alimentary canal to show its sympathy, by a sudden outburst of blood, when from some cause, whether operative procedure or otherwise, the ordinary hæmorrhoidal flux has been suspended. Epistaxis is a malady of every age and class, most incident to youth, at the period of puberty, and in adolescence—less so in advancing age. During the period of growth and development the cavernous bodies and the nasal erectile tissue are in a state of turgescence, requiring but slight injury to provoke a traumatic attack; and in adolescence, the period of life when the passions have their sway, and fear and joy and anger and grief and sexual excitement play their part, their onset is often marked by spontaneous hæmorrhage from the nose. I was myself cognisant of the case of a Dublin physician of eminence, who felt so acutely at being unjustly reproached by his son, that the blood spouted instantly from his nose to a great distance. Morell Mackenzie justly remarks that the influence of violent emotion in inducing nasal hæmorrhage did not escape the observation of Dickens, who in his story, "Our Mutual Friend," relates that Bradley Headstone, after his murderous attack on Eugene Wrayburne, when under the influence of terror, suffered from frequent discharge from the nostrils. Dr. Girod, of Clement Ferrand, relates the case of a young man under age, his companion in travel, who suffered from intractable and daily epistaxis; suspecting the cause, and gaining the young man's confidence, he confessed that it was due to daily malpractices. Acting on his advice, the young man relinquished the habit, and the hæmorrhage ceased; and Hippocrates, in his *De Morbis Vulgaribus*, writes: "Timochari hieme distillatione in nares præcipue vexata post veneris usum cuncta resiccata sunt."

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[a] Read before the Ulster Medical Society on Wednesday, May 4, 1892.

Epistaxis also sometimes presents itself as a symptom or concomitant of cardiac and hepatic, of renal and febrile affections, and of acute rheumatism with pronounced endocarditis or hypertrophy of the left ventricle. It is seldom that the malady can be regarded as of idiopathic origin, the outbreak being generally indicative of constitutional disorder and disturbance of the physiological equilibrium of the blood-current; often, after the successful suppression of the hæmorrhage, should the systemic cause be overlooked, the periodical return of the flux frequently occurs. While Morell Mackenzie attributes the frequency of nasal hæmorrhage in growing youths to plethora, Germain Sée, on the contrary, charges its inroads to anæmia, and censures parents and physicians for not recognising the condition as indicative of general debility. Possibly first attacks may be due to a hyperæmic condition of the blood, their frequent repetition, by draining the system of its normal amount of fibrin and red corpuscles, may induce an anæmic change; in this case, the passive hæmorrhage from the delicate lining of the nostrils shows an absence of the buffy coat, imperfect coagulation, and a soft clot, with often a diseased and impaired texture of the capillary vessels in the Schneiderian membrane. When, however, the nasal discharge is of an active character, the blood is urcharged with red globules and fibrin in increased proportion.

As to the ætiology and pathology of epistaxis, the result of my bservation and experience leads me to attribute its causation, in he first instance, to functional and often to structural disease of he liver, the hæmorrhagic diathesis being a dyscrasia—a secondary ffection due to chronic hepatic derangement, and this theory hould not appear unreasonable if we take into account the *rôle* of he liver in the constitution and distribution of the blood, its etabolic activity, its power of transforming hæmoglobin into bile igment, its capacity for storing up glucose under the form of lycogen to pour into the blood when it is needed, and its double upply of blood through the hepatic artery and portal vein; the roportion of the vital fluid constantly flowing through the liver fully one-fourth of the whole; when also we remember that, as the esult of heterogenesis, we owe the existence of lithic acid and the lycosuric dyscrasias, it is not unreasonable to attribute to the same rgan the formation of the deteriorated, depraved, and hyperinotic lood of the anæmic subject of epistaxis.

In support of my theory that hæmorrhagic discharges from the pper end of the alimentary canal, the lips, and the nose, are as vidently due to hepatic congestion as those from the rectum, I m enabled to quote the authority of an eminent pathologist—the te Dr. Moxon. In one of his lectures on Analytical Pathology, elivered in Guy's Hospital,[*] he states that "it is, indeed, very urprising to find a very free, and even a fatal, hæmorrhage from he stomach, while the mucous membrane, from which the blood as in epistaxis) must have come, is entire, yet, no doubt, this sometimes occurs. I have met with a case where cirrhosis of the liver led to total obstruction of the portal vein by *ante-mortem* coagulation in it, and in consequence of this obstruction a varicose œsophageal vein ruptured close to the cardiac origin of the stomach: a small hole was found leading into the vein channels; the patient had bled to death from this. The occurrence was equivalent to the rupture of *œsophageal piles*, and it is an interesting link connecting the common anal hæmorrhoids that arise from hepatic obstruction with the dilated venules on the cheeks and in the mouth, that we recognise as signs of obstructed hepatic circulation. *These venules are indeed no other than facial hæmorrhoids.*

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[*] Medical Times and Gazette, July 11, 1870. Page 58.

Michael Foster writes:[a]—"Since in the heart and great blood-vessels the blood is simply *in transitu*, without undergoing any great changes, it follows that the changes which take place in passing through the liver and skeletal muscles far exceed those which take place in the rest of the body." And Aitken:[b]—"Numerous instances of the hæmorrhagic diathesis have pointed to a definite organ as its source—viz., either a morbid condition of the spleen or liver; and in case of leukæmia, usually toward the close of life, a genuine hæmorrhagic diathesis is developed." Immermann, too, treating of the general diseases of nutrition, says:[c] "If a disorder of nutrition, looked at broadly, depends on a disturbance of the mutual relations between the blood and the tissues, it necessarily follows that it may originate either in an abnormal state of the blood or the tissues. Hence the pathogeny of the general disorders of nutrition suggests the possibility of their arising in different ways, and regards any one-sided theory—*e.g.*, that they are a blood disease, as, *à priori*, unjustifiable. For, since the blood, besides supplying the tissues with pabulum, also receives from them the products of cellular metamorphosis, it is always possible that owing to a morbid state of all, or a majority of the tissues a secondary heterotomy or dyscrasy of the blood may be induced, as in diabetes mellitus. The anæmic condition may possibly depend on a state of the tissue elements in which the desire for pabulum is relatively good, when accompanied with an inadequate energy of sanguification; the hyperæmic, on a weak acquisitive power in the tissues, while the power of renewal of the constituents of the blood is unimpaired."

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[a] "Physiology." Page 35.

[b] Aitken. Vol. II., page 78.

[c] Von Ziemssen. Vol. XVI., pages 257-9.

My contention, then, is that the starting-point in the constitutional disorder which takes the form of anæmia or hyperæmia, and of which epistaxis is a frequent result, is as clearly due to hepatic disorder as diabetes mellitus itself—viz, to an abnormal condition of the tissue elements or cells in the liver, secondarily affecting the blood and general constitution. With this theory of causation, treatment would naturally proceed on the lines of improving the constituents of the blood, and of restoring the health of the liver, whether functionally or organically defective. In accordance with my recorded experience,[*] the first indication would be most readily met by the free administration of chlorate of potassium alone, or in combination with iron; the second, by counter-irritation over the region of the liver, a large blister being practically the most convenient form; further, as chlorate of potassium is possessed of remarkable hæmostatic properties, I am satisfied that it is not solely through its immediate action on the molecular elements of the blood, but also by its direct operation on the disordered condition of the liver, that it controls and limits the congestive and other lesions of this important organ. That potassium chlorate has the power of yielding some life-giving element to the blood in cachectic conditions, and that its presence in the blood acts as a powerful stimulant to cell-growth, cannot be questioned. It is at the same time difficult to explain its *modus operandi*, whether by the separate action of its important elements, or, in a topical manner, *per se*.

Bence Jones says that—"By dialysis all crystallised bodies act as directly on the textures as on the blood; they act according to their chemical power when they enter the textures, and according to the chemical and physical properties of which the textures are composed." Besides, according to Sir Charles Cameron, "drugs produce powerful catalytic effects without undergoing themselves any chemical changes." But, whether through the agency of its separate elements by dialysis, or catalytic action, the clinical facts remain, that the administration of potassium chlorate produces in the human subject the identical result claimed for oxygen by Beddoes, Thornton, Birch, and Hill, that it energises to a considerable extent the nutritive functions, increases the appetite, slightly elevates the temperature, stimulates the cardiac movement, and augments the body weight, increases the number and stimulates the organic activity of the red globules. The combination of topical and internal remedies having proved so satisfactory in the suppression of hæmorrhage from the bowels dependent on bleeding piles, and success having often attended their separate action, through their curative influence on the congested liver, I became convinced that equally satisfactory results would follow in cases of nasal hæmorrhage by the adoption of similar measures. I had for a long time recognised the fact, that in the great majority of persons suffering from congestions, cirrhoses or other hepatic diseases, if free from anal discharges, they were subject to desultory bleeding from the nose, and in most instances from the right nostril. Extensive clinical experience tallied completely with my theory of causation. and confirmed its correctness, and has enabled me to claim for counter-irritation over the liver the merit of a speedy and effectual remedy for this troublesome disorder. Hæmorrhage from the right nostril has always been regarded by me as a sign of hepatic disease. and even Galen[a] had long since referred to this peculiarity as a guide in treatment of epistaxis. "Cupping glasses," he says. "applied to the hypochondrium arrest nasal hæmorrhage. When the blood flows from the right nostril they should be applied over the liver; from the left, then over the spleen; when from both sides, then the cupping glasses should be applied over both sides."

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[*] British Medical Journal, October 30, 1880. N.B.—I intentionally pass over topical treatment during an attack, as there cannot be any doubt of its necessity.

In a paper[b] read at the Cork meeting of the British Medical Association on the subject of the hæmorrhagic diathesis, I related the particulars of a case of epistaxis hæmophilia, in a youth of eighteen, engaged in a mill near Belfast, who suffered so much from a continuous dropping of blood on the flax he was manipulating. that he feared he would have to retire from the business. His family history is remarkable, his father having been subject to many severe attacks of epistaxis—sometimes persisting, despite of treatment, for a month at a time; another member of the family suffered similarly from the extraction of a tooth, a wound by shaving giving rise to most troublesome bleeding. I prescribed an ounce of chlorate of potassium in a pint of water, with the addition of one drachm of muriated tincture of iron—a fluid ounce for a dose—thrice daily. Before the mixture was finished the case was complete and permanent; this dates from June, 1874.

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[a] Gazette Hebdomadaire. 1881. P. 145 du feuilleton.

[b] British Medical Journal, 1880, October 30.

In the *Lancet*, October 30, 1886, I published the following notes of four cases:—

Case I.—On May 13, 1885, I was sent for, to visit J. B., aged eighteen, a counter hand in a spirit store, subject to free bleeding from the right nostril for many weeks, to severe headache, and constipated bowels. No history of piles. On examination I found the liver tender on pressure and somewhat enlarged. I then applied the liquor epispasticus freely over the hepatic region, telling the young man that after five hours the bleeding would permanently cease, and ordered some cholagogue medicine. As I predicted, the hæmorrhage ceased, without any return up to the present date.

Case II.—On same day a young man, apprenticed to a chemist, came, accompanied by his father, to me. He had suffered very much from indigestion and vertigo, and hæmorrhage from right nostril for many days. I had formerly treated his father for congestion of the liver, due to excessive drinking. On examining the patient I discovered an enlarged liver with congested cutaneous veins traversing the right hypochondriac region. I applied the fluid blister with the usual result—an immediate cessation of the epistaxis. The young man has since emigrated, but up to the day of his departure, six months after, there had been no reappearance of the blood.

Case III.—On May 25th, 1885, J. S., an indoor servant, sought my advice. He had been suffering for the previous six weeks from profuse epistaxis from the left nostril. At first it appeared at regular intervals, but latterly it observed no limit, coming on six or seven times every day. He had a large and torpid liver, and many of the subjective signs of the disease—disturbed sleep, headache, irritable temper, borborygmi, hardened stools, depressed spirits, unwillingness to rise in the morning, and drowsiness in the day. I then applied the counter-irritant over the seat of the disease; the epistaxis yielded at once, as well as the other objective and subjective symptoms. The cure has been for so far a permanent one.

Case IV.—While paying my morning visit to a straw lodge—an improvised barrack for police during the riots of 1876—accompanied by one of the officers, I found one of the men in bed with a handkerchief at his nose, saturated with blood, which had been flowing for the greater part of the previous night. On satisfying myself of the causal factor in the attack, I painted him over the liver with the epispastic fluid, prescribing no other remedy but rest in bed. On our revisiting the man next day, he informed us that from the moment that the blister began to pain him the hæmorrhage declined, and shortly after ceased altogether.

Case V.—*Vicarious Bleeding from the Nose and Under-lip.*—Mrs. M., aged thirty-eight years, the wife of a sergeant in the Royal Irish Constabulary, mother of six children, called on me early in March, 1885. Before marriage she had suffered from hæmorrhoids, and during her first and subsequent pregnancies from hepatic congestion and occasional hæmorrhage from the bowels, which often gave me some anxiety on her account. On this occasion she presented every sign of anæmia and debility—blanched cheeks and lips, sunken features, compressible and feeble pulse, undue palpitation of the heart on the slightest exertion, continuous headache, and frequent vertigo. She attributed her exhaustion to profuse bleeding from the left under-lip, occurring at every meal and generally lasting for ten minutes each time. On examination I discovered a slight abrasion at the junction of the epidermis with the lining membrane of the left lip, about half the size of a threepenny coin, from which the blood flowed freely. Mrs. M. had removed from my neighbourhood two years previously; and as the hæmorrhoidal flux again became troublesome, by the advice of an experienced physician she entered the Royal Hospital, Belfast, in February, 1883, where the offending growths were soon deligated by one of the attending surgeons of that institution.

After returning home in April her relief was of short duration, irritation about the anus occurring from time to time, and occasionally a slight discharge of blood from the nostrils. But in the June following her left under-lip became painful, and blood began to ooze from it, once or twice in the week; the intervals then became shorter, the drain occurring every day, then at every meal, or when by accident the lip was hurt.

Having from previous experience acquired a thorough knowledge of the patient's constitution and requirements, I did not hesitate but immediately ordered the application of a blister, 8 inches by 4, for eight hours over the region of the liver, to be followed by cotton-wool dressing. On my visit next day I was informed that from the moment free vesication was established all labial hæmorrhage had ceased. I then prescribed the use of chlorate of potassium and tincture of iron in liberal doses; there was a speedy return of health, her colour and bodily strength soon reappeared, the headache and vertigo troubled her no more. She occasionally complained of pain at the delicate lip; and with one exception since that date, when a slight bleeding appeared, which, without consulting me, she speedily arrested by a blister over the liver, she has not had any recurrence of her trouble.

I shall conclude with two cases of recent occurrence:—

Case VI.—Miss N., a lady of middle age, residing in the country, sent for me in March, 1891, for a severe attack of epistaxis, recurring at intervals and causing anxiety on account of her distance from medical advice. Recognising in her case an enlarged and torpid liver, greatly due to want of exercise, and to good living, I applied the fluid blister over the affected organ, and was informed next day that all hæmorrhage had ceased. I recommended some active purgation, and more moderation in food, and there has not been any return of the malady.

Case VII.—Miss L. D., aged twenty-six, a worker in a wareroom, necessitating a sitting posture and head bent over her work—a branch of the linen trade—called on me on 4th April, 1891, complaining of frequent attacks of nasal hæmorrhage, sometimes lasting for a week and requiring her abstention from work for that time; the disease had continued for three years, and she had consulted many physicians and specialists, having among other remedies been using Blaud's pills for many months without relief. I applied the blister as usual, recommending the hæmostatic of iron and potassium chlorate. She had an immediate recovery, and has been able to attend her place of business with regularity, except that on 9th December, being prostrated with influenza for a few days, her nose bled for about three minutes, requiring no special treatment.

It is, probably, worthy of note that almost coincident with my researches on the nature and treatment of hæmorrhagic diseases a learned Academician and eminent surgeon, M. Verneuil, of La Pitié, Paris, was perseveringly working out a similar problem. He arrived with me at the same conclusion—viz., that in cases of nasal and anal hæmorrhage the liver was primarily in fault, and that our curative efforts should be directed in the first place to it. My cases of anal and nasal hæmorrhage, as published in the *British Medical Journal*, occurred in 1867 and 1874; and M. Verneuil's Memoirs in 1870 and 1875. Further, the first five cases of epistaxis which I have just read, and which appeared in the *Lancet* in Oct., 1886, were followed by a paper communicated to the Academie de Médecine, Paris, six months after—April, 1887—M. Verneuil giving an account of three remarkable cases of epistaxis cured like mine by counter-irritants, or, as he called it, revulsives over the liver. M. Verneuil politely sent me a copy, from which, in an abbreviated form, I give the three cases:—

Case 1.—A man, aged fifty-nine, of robust frame, given to alcoholic excess, resulting in a marked diminution of the size of the liver, subject to intermittent attacks of epistaxis, which plugging the nostrils, sulphate of quinine, ergotin, and digitalis failed to arrest. Recognising a coming cirrhosis of the liver, and a causal relation between this morbid condition and the hæmor rhage, M. Verneuil directed the application of a blister to th right hypochondrium, putting an end to further medication. Th hæmorrhage was definitely arrested by this means. Case 2.— Traumatic epistaxis—A groom, aged forty-five years, of sob habits, but much subject since his fifth year to attacks o epistaxis, received an injury from the foot of a horse upon hi face, followed immediately by profuse and continuous bleedin which resisted plugging of the nasal fossa and all internal med cation. On examination, all the viscera except the liver prov to be sound; the latter was notably diminished in volume. Th suspension of all internal remedies and the application of a blist over the right hypochondrium arrested the epistaxis at onc Case 3.—Intermittent epistaxis in a patient formerly the subje of nephritis, at present suffering from an affection of the hear and congested liver; failure of plugging, ergotin and the wat of Lechelle, and perchloride of iron; immediate cure by th simultaneous employment of sulphate of quinine and a large blist over the region of the liver.

M. Verneuil concludes from these facts—1st. Latent and ev non-malignant affections of the liver may provoke and be th occasion of troublesome epistaxis; 2nd. Relief procured by th aid of a large blister over the right hypochondrium, which appea to be the best means of curing hæmorrhages of this nature. M Verneuil concluded his paper in the following terms:—"T maladies of the liver constitute a serious complication for oper tions, and when one recognises clearly their existence in a patien the wisest course is at once to return his bistoury to his pocket."

While admitting the importance of the clinical facts the Acad micians preferred not to commit themselves to any therapeut theory; they did not, as a scientific body, admit the principle o revulsives, M. Dujardin-Beaumetz declaring that was too extensi a subject to enter on—in fact, since the time when M. Malgaig some fifty years ago commenced a crusade against revulsives, an particularly blisters, in the Academie de Médecine this subje has continued to prove a bone of contention. M. Colin could n understand why blisters were preferably applied over the liv as there was no vascular connection between the skin and th organ; he considered that the heart was at fault, and that epi taxis was provoked by exaggeration of the vascular system tha ruptured the delicate vessels of the pituitary membrane in the nos

M. Verneuil, in reply, said it was not necessary to have any vascular connection between the organ and the part to which blisters were applied, and that it was the nervous system through the existence of reflexogene zones that determined the point of application. Finally, he said that it was not his desire to formulate any therapeutic ætiology, but simply to state interesting facts.

The ideas generally entertained at present in this country as to the ætiology of bleeding piles afford a typical example of an error to which modern physicians are occasionally liable—viz., that of mistaking secondary and accidental symptoms for the primary disease, and of the failure to recognise the connection that exists between these symptoms and certain morbid processes in important organs. Proceeding on these lines many physicians, not recognising a disordered liver as the *fons et origo* of the anal hæmorrhage, and not directing their energies to its improvement, incontinently relegate their patient to the operating surgeon, who, without hesitation or remorse, proceeds to deligate and destroy by his instruments of precision the safety valve provided by nature for the relief of the suffering organ. Sometimes, however, as in the instance recorded in Case V., the *vis medicatrix* changes the venue from the south to the north pole, and thus endeavours to baulk the surgeon's beneficent intentions by establishing a counter-current from the upper end of the alimentary canal. Happily for the patient it is not deemed necessary to repeat the same heroic remedy when nose or lip performs the vicarious duty.

I have always regarded the hæmorrhoidal flux as well as hæmorrhage from the nose as the outcome of the hæmorrhagic diathesis, itself the direct product of the hepatic cells in a state of hyperactivity, and, as a consequence, in endeavouring to restrain these inordinate discharges I have prescribed those remedies whose powers I have tested in controlling the undue activity of all the conglomerate glands, the liver included, my chief reliance being upon chlorate of potassium. When the case was urgent I have also invoked the aid of vesication, which has never failed me by its counter-irritant and derivative action in permanently suppressing either form of hæmorrhage. My experience dates back to 1867, and my first published case, which I read at the Cork meeting of the British Medical Association, appeared in the Journal of October 30th, 1880, as follows:—

Case I.—J. C., a member of the Royal Irish Constabulary, after returning from duty at night from the Music Hall, found one of his boots full of blood, which he traced to the rectum. I saw him next day (December 19, 1867), and directed his removal to the Royal Hospital. I had not on examination discovered any sign of external hæmorrhoids. He remained in hospital till the 14th February following without any benefit, and then returned to barracks. I then prescribed rest in bed and chlorate of potassium in the proportion of one ounce of the salt to a pint of water, one fluid ounce three times a day. After the first day he began to improve, and at the end of the third day every trace of the disease had disappeared.

Case II.—Mrs. B., mother of three children, sent for me in April, 1875. When I arrived she was bleeding profusely from internal piles; had been ill for some days, and the drain had weakened her to an extreme degree. After prescribing absolute rest, I ordered a large blister to be immediately applied over the region of the liver, and my favourite hæmostatic—solution of chlorate of potassium and tincture of iron. This was done, and improvement followed at once. Next day she was free from all hæmorrhage. She afterwards, on the death of her husband, became a trained nurse in the Royal Hospital, and was never known to complain in a like manner.

Case III.—Mrs. M'D., aged thirty-six years, mother of six children, sent for me on March 8, 1886. I found her in bed, pallid and exhausted from a profuse discharge of blood from the rectum which had continued for several days. The blood accompanied every evacuation, sometimes to the amount of three or four ounces. On examination I found a fringe of external piles surrounding the anus, and inside the sphincter a number of knotty tubercles, from one of which arterial blood flowed freely. In this, as in the former case, I immediately applied a blister over the hepatic region, and ordered, as an adjuvant, a mixture of tincture of perchloride of iron and chlorate of potassium in solution. The relief was immediate, and the patient soon recovered her natural colour and strength. At the end of a fortnight, however, I was again sent for, as the bleeding had returned as freely as ever. The relapse was due to the patient having undergone great fatigue the previous day while assisting her husband in business. As her friends had now become anxious I requested Dr. Walton Browne to see her with me. He agreed with me in continuing the hæmostatic mixture, having, in addition, a sedative enema at intervals. These remedies only gave her partial relief, and, at the request of the patient, I reapplied the blister. The remedy was again successful; all bleeding ceased, and has not reappeared up to the present date.

In the leading article of the *Bulletin Général de Thérapeutique*, Paris, of July 30, 1888, M. le Docteur Petit[a] writes as follows:—

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[a] Du Traitement du Hæmorrhages par le Revulsion sur la region hépatique.

The *rôle* of diseases of the liver in the pathogeny of hæmorrhages admitted by almost all the world since the memoir of Monneret 1853 upon spontaneous hæmorrhages, and those of M. Verneuil 1870 and 1875 upon traumatic hæmorrhages. Starting from se data it occurred to M. Verneuil that it would be judicious certain intractable hæmorrhages to have recourse to revulsive asures in the hepatic region; that is to say, to treat the lesions the liver as the exciting cause of the hæmorrhages. The most mmon of these spontaneous hæmorrhages appeared to be the morrhoidal flux and epistaxis, and it was against the first of se that M. Verneuil in 1874 attempted revulsion over the liver. oreover, at his request, one of his house surgeons, M. Duret,[a] in er to illustrate the *rôle* which affections of the liver played in pathology of hæmorrhoids, demonstrated by several accurate ctions the anastomoses of the originating venules of the portal in with the hæmorrhoidal veins. In the same year, 1885, I. Duret published in the *Progrès Médical* a clinique of M. rneuil, giving three cases in which the relation between an ection of the liver and the hæmorrhoidal flux was abundantly enced.

Cases 1, 2, 3.—In a clinical lecture delivered in 1875[b] at Pitié, M. Verneuil detailed the history of a patient suffering m profound anæmia, caused by a hæmorrhoidal flux of twenty rs' standing, and recurring each time he visited the closet. He d particular attention to the state of the liver, which was con- rably increased in size; the spleen, too, showed an equal largement. Without deciding whether or not the hypertrophy the liver had been the exciting cause or the consequence of the norrhoids, M. Verneuil clearly established the connection tween this affection of the liver and the hæmorrhoids. The e relation existed between the other two patients referred to the lecture. One of them presented an enormous hypertrophy the liver and the spleen, and voluminous hæmorrhoids. Since ing under his care he had administered a number of cold ches over the region of the liver and spleen, and he could tes- to the great diminution of both organs; as for the hæmorrhoids they had completely disappeared. The influence of revulsion by means of cold douches upon the affection of the liver and upon the hæmorrhoids was most remarkable in the second patient, enfeebled by numerous discharges of blood flowing from voluminous hæmorrhoids. He was in a state of profound anæmia, and showed an enormous liver. M. Verneuil, who had intended to operate upon him, determined first to reduce the hypertrophy of the liver. He advised hydrotherapy, which, after six months, proved thoroughly successful in lessening the size of the liver and in putting an end to the hæmorrhage. The salutary influence of revulsion in this case established clearly the relation between the affection of th liver and also the cure without any operation on the hæmorrhoid Since that time M. Verneuil has completely abandoned the use of bloody operations in the treatment of hæmorrhoids. He has exclusively adopted dilatation by force (rupture of the sphincter with the aid of interstitial cauterisation by the thermo-cautery when the hæmorrhoids are very numerous or very vascular. The application of compresses saturated with phenic water and some days of repose suffice to complete the cure.

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[a] Duret. Sur la disposition des veines du rectum et de l'anus et sur quelques anas- ses peu connues du système port. Le Progrès Médical. 1877. P. 304. Recherches pathogenie des hemorrhoides. Arch. gén. de méd. 1886. 7° Serie 1. V. l.

[b] Published by M. Duret in Le Progrès Médical. May 15. P. 261.

M. Petit concludes thus:—"The subjects of chronic hepati affections are liable to many spontaneous hæmorrhages, medical o surgical. A large number of facts having demonstrated tha there exists a direct relation between spontaneous hæmorrhag and chronic affections of the liver, it seems to be a logical conclusion to treat the hæmorrhage by revulsion over the region of th liver, which usually proves most successful. When, then, we ar called to a patient attacked by spontaneous hæmorrhage the indication is to examine the state of the liver, and if this organ prov to be in an abnormal condition then to apply a blister to th region occupied by it."

Such is a slight sketch of the teaching of the eminent surgeo to La Pitié and other Gallican authorities. That it has not yet been accepted in England is undoubtedly true; and althou there is not another organ of the body whose congestions a hypertrophies are more amenable to treatment, yet the minds the leading medical authorities appear only anxious to excel the invention of the most perfect instrument of mutilation, a to decide whether the clamp, the ligature, or the knife, or t actual cautery is best adapted for the destruction of the safe valves provided by nature for the relief of an overburdened visc at its lowermost outlet, the hæmorrhoidal veins.

If a recent discussion at the Medical Society of London[a] may be accepted as voicing the opinion of the metropolitan profession, it would appear that the *rôle* of the liver in the causation of piles is ignored, and that the favourite remedy for a medical ailment is the mechanical treatment of aggressive surgery.

When one compares the bald and unsupported opinions of the speakers, with the exception of the author of the paper, who gave a qualified assent to the causal influence of the liver in this discussion supremely anxious to "*exonerate*" the liver from any part except occasional in the causation of piles, with the outspoken dictum of Astley Cooper delivered sixty years ago in old St. Thomas's, he would feel a difficulty in complimenting them on the progress of medical science in the end of the 19th century. In his lecture on Piles,[b] after mentioning costiveness and diarrhœa as often a cause of this complaint, Sir Astley continues—"It very often arises from disease of the liver, and congestion of the veins in the intestinal canal. The difficulty of transmitting the blood through the vena portæ occasions a congestion in the hæmorrhoidal veins, and obstructed secretions in the intestinal canal lead to the same effect."

It may be asked, What is the *modus operandi* of the blister in these hæmorrhagic ailments? The blister in these cases acts—first, as a counter-irritant by causing an irritation of the surface and of the terminal branches of the cutaneous nerves, which, through the influence of the trophic nerves, affects the calibre of the arterioles, and thus controls the congestion and hypertrophy; but the vesicant acts also as a powerful depletive by abstracting from the circulation in the neighbourhood of the diseased organ a quantity of white blood, highly albuminous and coagulable on the application of moderate heat. Doubtless, wet-cupping in the hypochondriac region or free leeching from the anus would also rapidly react on the liver, and perhaps as readily relieve present congestion; but, irrespective of the greater inconvenience of such remedies, there is a potent objection to their use—viz., that they must abstract from the system, already too anæmic, a quantity of red globules and fibrin, confessedly present in insufficient proportion; while the blister is as powerfully depletive, leaving untouched the hæmoglobin, and not increasing the hyperinotic condition.

In conclusion, although professional men are often chargeable with marked reluctance in admitting the relation between caus and effect, between remedy and cure, yet from the uniform sequence of events that attends the revulsive method of treatmen in epistaxis and the hæmorrhoidal flux, I think I may safely claim for it the title of a reliable remedy. In the words of Peter Latham: "The treatment of diseases is in fact a part of their patholog What they can bear, the kind and strength of the remedy, an the changes which follow its application, are among the surest tests of their nature and tendency."

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[a] Lauder Brunton. On the Causation and Treatment of Piles.

[b] Lectures on Surgery. 4th edition. Page 420.

ART. XXI.—*Some Modern Methods of Sewage Treatment.*[b] By

EDGAR FLINN, D.P.H., F.R.C.S.I., M.R.C.P.I.; Examiner State Medicine, Royal Colleges of Physicians' and Surgeon Conjoint Examining Board; Surgeon, St. Michael's Hospit Kingstown; formerly Med. Officer of Health, E. Staffordshir

> Dr. Alfred Carpenter has truly said that—"It is the object of the sanitarian to brin about conditions which diminish the frequency of early death, which assist to rem bodily pain from the list of human grievances, and to pave the way for that time wh every person born into the world will enjoy his birthright, without having it curtail by the acts of other people."

THE object I had in view in the drafting of this paper was t draw the attention of this Section to the benefits derivable fro the most recent methods of sewage disposal. "The sewag problem," as it has been aptly termed, has passed through ma stages during the past twenty years or more, but it is only wit the last few years that scientific knowledge has sufficient advanced to bring this vexed question within the possibility a final and successful solution. Sanitarians have devoted them selves assiduously to grapple with the difficulties that beset th way in the disposal of the sewage of cities and towns, and they had not, to a great extent, surmounted these difficulti the condition of the large centres of population would long this have become intolerable. Further, in regard to the progr that has been made in sanitary science, the reign of Qu Victoria will ever stand prominently forth as a most import epoch, as at the time of her accession the sanitary condition the people was as bad as bad could be.

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[a] Author's preface, page 38.

[b] Read before the Section of State Medicine of the Royal Academy of Medic in Ireland, Friday, May 6th.

There has been a rapid advancement in the question of sewage treatment during the last ten years, and I opine that we have not yet come to a finality in this regard. The enforcement of the provisions of the Rivers Pollution Prevention Act of 1876, has become much more stringent, and effluents must attain a much higher standard of purity than heretofore. Previous to 1876 sewage matter and refuse from manufactories were discharged into rivers and streams, and the result was a wholesale pollution of the watercourses throughout the country. For some time after the Act mentioned above was passed, there was a great difficulty in the enforcement of its provisions, and it is only in very recent years that the benefits intended by its enactment have commenced to take effect. The new methods of sewage treatment have, no doubt, helped very much to this end, and the authorities have become much more alive to the necessity of preserving the waterways pure and wholesome. The alacrity with which sanitary reformers, as recently as twenty years ago, were anxious to get rid of refuse by pouring it into the nearest watercourse, completely blinded them to the fact that they were only temporarily relieving themselves of an evil that must, sooner or later, have its pernicious results elsewhere.

Three principal methods are recognised and are in use for the purification and disposal of sewage—viz., precipitation, filtration, and irrigation. The precipitation process is carried out by means of various reagents—the principal object in view being the purification of the sewage—lime, either alone or in conjunction with other chemicals, being most frequently used. The process of precipitation by lime has been pronounced, by the Rivers' Pollution Commissioners, "to be a conspicuous failure;" indeed, practically, the same may be said of the majority of the other methods employed in the precipitation of sewage, notably, the lime and sulphate of alumina process; the A. B. C. alum, blood and clay process; the lime and chloride of iron process, &c. The defined position of precipitation of sewage may be summed up in the words of Dr. Dupré, F.R.S., a well-known authority on sewage purification. He says: "As regards processes of precipitation I will merely remark that inasmuch as no proportion of chemicals which can practically be employed will do much more than clarify the sewage, the proportion of chemicals employed should be kept as low as is consistent with the object to be attained—namely, clarification; and that, more particularly, the use of large quantities of lime should be avoided." In the more modern process, known as "the ferozone and polarite process," which will be subsequently referred to, the introduction of the precipitating material ferozone is followed by filtration of the effluent through a filter containing polarite. The advantage of having a precipitant immediately followed by a filtering medium is obvious.

The filtration system of sewage purification is divided into simple filtration. and intermittent downward filtration. In the former process the sewage is merely strained or screened, but the effluent is not purified. In the latter process, that of downward filtration, the Rivers' Pollution Commissioners reported that no system was attended with better results than the filtration of sewage through a considerable depth of soil. According to the Report of the Commissioners this process of sewage purification "was essentially one of oxidation, the organic matter being converted into carbonic acid, water, and nitric acid; hence the necessity for the continual aëration of the filtering medium which was secured by intermittent downward filtration." The requisite filtering area required to carry out this process of purification, as estimated by the Commissioners, is one acre, drained to a depth of six feet for every 3,300 of the population.

The process of irrigation on sewage farms is the one attended with most beneficial results, as it not only secures a purified effluent, but, in most instances, becomes a source of profit, and utilises the value of the sewage for the benefit of the crops grown on the land; but to insure success the surface must be irrigated on the intermittent system to allow of sufficient aëration of the soil, and no doubt the best purifying results will be obtained by a combination of both methods—viz., irrigation and intermittent downward filtration. This system is in operation at Birmingham, Wolverhampton, Leamington, Reading, Doncaster, Croydon, Nottingham, Warwick, and other smaller towns.

The comparative merits of the systems of purification of sewage are given by the Rivers' Pollution Commissioners, as follows:—

AVERAGE RESULTS.

	Percentage of Dissolved Organic Pollution removed		Percentage of Susp Organic Impurity re
	Organic Carbon	Organic Nitrogen	
Chemical processes	28·4	36·6	89·8
Intermittent downward filtration - -	72·8	87·6	100·
Irrigation - -	68·6	81·7	97·7

The systems that have been thus briefly referred to are, no doubt, familiar to many, but the comparatively new systems of sewage treatment that I am desirous of bringing before this Section of the Royal Academy of Medicine are yet not very generally known, and in view of the fact that large and costly works are about to be carried out for the sanitary well-being of the City of Dublin, a short reference to each may thus be opportune. By way of preface it is, perhaps, worth noting that in connection with the London Metropolitan sewage disposal problem a combination of lime and proto-sulphate of iron was recommended by Mr. Dibdin, F.C.S., F.I.C., in the proportion of 3·7 grains of lime, in solution, to 1 grain of proto-sulphate of iron per gallon of sewage matter. The Metropolitan Board submitted the initiative results of this process to four independent chemists of the highest standing—viz., Sir Frederick Abel, Dr. W. Odling, Dr. A. W. Williamson, and Dr. A. Dupré, who advised that the method of precipitation was a good one, but that it left a sufficiently unpleasant smell to prohibit the effluent water being discharged into the river during warm weather at all states of the tide; and they subsequently recommended, after careful observation of the experiments, that if the liquid, resulting from precipitation with lime and proto-sulphate of iron, was subsequently treated with manganate of soda and sulphuric acid, it would be deodorised and purified to such an extent as to render its discharge into the river Thames unobjectionable at all states of the tide—the resulting sludge being conveyed into deep sea by specially-designed steam barges. My object in making this reference is that in the proposed Main Drainage Scheme for Dublin a similar treatment of precipitation, and carriage to sea, of our metropolitan sewage will be carried out from the plans of Mr. Chatterton, C.E. I am not aware what the precipitant agent is likely to be, but the probability is that the London system may be followed in Dublin in its entirety, and, if such be the case, a final and successful solution to what has been the eye-sore of a century or more will be achieved.

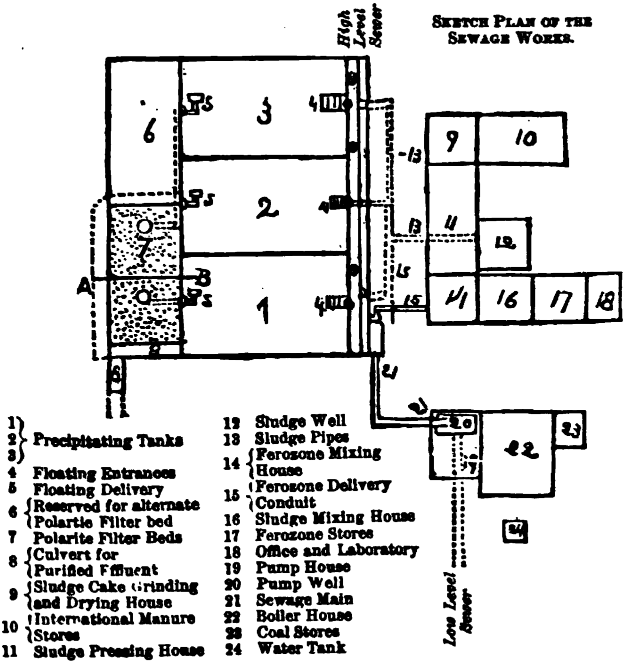
THE INTERNATIONAL SYSTEM,

or the Ferozone Polarite System of Purification is of very recent date, and where it has been in operation appears to have been most satisfactory, and its results have been most encouraging. It is quite a new departure in sewage treatment, and has excited a considerable deal of interest. It has been in use at Acton for the past four years, and the official reports credit it with being as perfect a system, if not the most perfect, of sewage purification as has yet been devised, the purified effluent being inodorous, non-putrescible, clear, and tasteless, which can be discharged into a river or water-course without any danger, or any tendency to undergo secondary decomposition. The process is carried on in two stages, viz.:—

1. By precipitating and deodorising the sewage in settling tanks by the aid of a magnetic precipitant and deodorant called ferozone.

2. By passing the partly purified sewage effluent from the settling tanks through polarite filter-beds, which arrest any solids remaining in suspension, and oxidise and render innocuous the putrescible matter held in solution.

Ferozone is the registered trade name of the material used n deodorising sewage, and precipitating the solids therefrom.



Sketch Plan of the Acton Sewage Works, and Section of the Polarite Filter Beds.

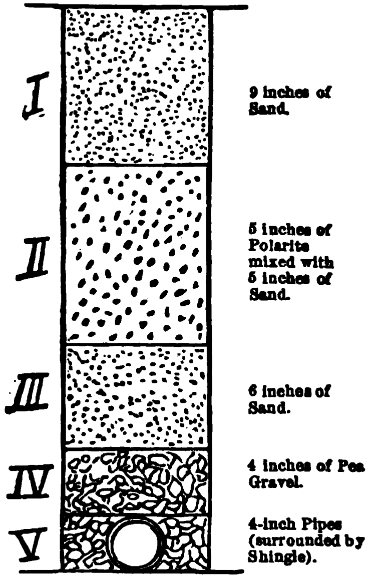
It is rich in salts of iron, alumina, and magnesia, and also contains magnetic oxide of iron, in a very spongy and absorbent condition; by virtue of its soluble iron and magnesia salts it quickly causes subsidence of the suspended solids.

Polarite is the registered name of the material used for further filtering and purifying the ferozone sewage water from the putrescible matter dissolved therein; it is a black, porous, and magnetic oxide of iron, insoluble in water, and practically everlasting; it is very hard and absorbent; although consisting chiefly of iron, it does not rust, and its durability is unlimited; a cubic yard of polarite weighs about one ton, and is sufficient for rather more than six square yards of filter-bed; moreover, it is cheap enough to bring it into general use.

In carrying out the process of purification by this system, the sewage on reaching the outfall works is run through strainers to arrest floating solids, such as corks, rags, &c., and then flows quickly through a floating trough into a settling tank, the floor of which inclines towards the centre, so that a gutter may convey the sludge to the outlet valve. Before entering the tank the crude sewage receives a dose of ferozone which costs about one farthing for every thousand gallons of sewage treated. This can be added automatically by placing baskets of ferozone in the flowing sewage or by using Beloe's patent automatic sewage-mixing machine. In places where the sewage does not flow by gravitation, but has to be pumped, and steam-power is therefore available, the ferozone may be ground with water or sewage in a small edge-runner mill and added automatically to the crude sewage in a liquid state. The flow of sewage through the tanks should not be continuous if it can be avoided. Quiescent tanks are better for precipitation purposes, whatever kind of precipitant be used. When a tank is full its contents should be left standing for about two hours, so that the ferozone may have time to act thoroughly. As towns differ in the quality of their sewage, the needful period of quiescence may vary in different places. The ferozone will cause deodorisation and precipitation to take place in the sewage, and a considerable part of the albuminoids in solution will coagulate and be precipitated with the solids. The supernatant sewage-water thus clarified would then be drawn off and run through polarite filter-beds which produce a higher degree of purification.

The polarite filter-beds usually consist of six inches of broken stone in which small agricultural drain-tiles are embedded, three inches of gravel, six inches of sand, twelve inches of polarite and sand mixed in equal proportions, and at the top a layer of nine inches of fine sand, making a total depth of three feet of filtering material. The depth of the layers is sometimes varied to meet special requirements. Polarite filters purify tank-effluents which have been treated with ferozone at the rate of 1,000 gallons per square yard in 24 hours. They give better results than are generally produced by land filtration, and at less cost and without nuisance. Land filters about 1½ gallons per square yard in 24 hours, therefore one acre of polarite filter-bed will do more effective work than 666 acres of land. Hence the cost is much less than that of a sewage farm, and at the same time the results produced are more certain. The value of polarite for sanitary purposes can scarcely be over-estimated. By using it in small but powerfully active filter-beds it is unnecessary to buy large areas of land for sewage farms which, often become a public nuisance. Land is unable to take a continuous supply of sewage without great deterioration in its purifying

SECTION ON LINE A.B. OF POLARITE FILTER BED.


I
9 inches of Sand.
II
6 inches of Polarite mixed with 6 inches of Sand.
III
6 inches of Sand.
IV
4 inches of Pea Gravel.
V
4-inch Pipes (surrounded by Shingle).

VERTICAL SECTION OF "POLARITE" FILTER BED.

and aërating properties. It gets clogged and choked with albuminous and glutinous matters, and becomes sewage-sick and inefficient as a purifying agent. Sewage comes every day to be treated whether the farm is, or is not, in a condition to deal with it. In wet seasons, when the farm is sodden by rain and wants rest, an increased quantity of sewage comes to be purified.

The polarite filter-bed only requires a few hours' rest occasionally for aëration and for cleansing the surface sand, which can be done by an improved method at a nominal cost. The polarite never requires to be removed or replaced. Hence it is better to lay down several small beds rather than one or two large ones, so that they may rest a few hours alternately for aëration and cleansing.

The resulting ferozone sludge is comparatively inoffensive in odour, and in this regard has an advantage over the lime, and other processes; it has been proved to be richer in manurial value, and the sewage manure produced by the process is shown by analysis to contain nitrogen equal to from one to two per cent. of ammonia, besides phosphates; if placed under cover it dries very quickly, and can be ground into powder. At Acton it is sold as a fine powder at the large sum of 30s. per ton, whereas in districts where lime is the precipitant, the resulting sludge is carted away as a worthless material. Certainly this system of sewage treatment bids fair to solve a difficult problem, and if the resulting sludge can be made to return a fair revenue, I apprehend that urban and rural sanitary authorities will not be slow to recognise its merits. In Ireland it has not had a trial, but it is in operation at Hendon, Swinton, near Manchester, Balmoral, and sewage works are in process of construction at Guilford, Birkdale, and Sale.

As a filtering medium, polarite appears to have undoubted advantages as compared with sand-filtering material, and it is recommended for filter-beds in water-works, on the ground of economy as well as efficiency. It is well known that sand filter-beds have no chemical purifying power; they merely act as strainers, and retain putrescible matter, instead of oxidising and making them innocuous, and they leave them unchanged to contaminate the water. An instance of this occurred in the north of England, where an outbreak of typhoid fever was caused by the impurity of the filter-beds at the water-works. A Government inquiry traced the outbreak to fever germs in the filter-beds, and the epidemic did not cease until the filter-beds were closed. Polarite not only enters into the purification of sewage effluents, but is now being used in the laying down of filter-beds in various parts of England, and report speaks highly of it as a filtering medium.

THE TREATMENT OF SEWAGE BY ELECTRICITY

is the most recent of all methods, and may be said to be very promising. Mr. Santo Crimp, referring to the Webster electrical process for sewage purification, says: "When it is considered that the application of electricity is almost daily extended to new objects, and that the science is as yet in its infancy, it must be admitted that the results achieved by the Webster process are of the most encouraging nature. The time may come when our towns will be lighted with electricity by night, whilst by day the dynamos will be employed in purifying the sewage; then the loading of the sewage with chemicals, with the consequent production of large masses of sludge, will no longer be necessary." Sir Henry Roscoe, M.P., F.R.S., has carefully investigated this process, and he mentions that "the quantity of sewage operated on in each experiment was about 20,000 gallons. The reduction of organic matter in solution is the crucial test of the value of a precipitating agent, for unless the organic matter is reduced the effluent will putrefy and rapidly become offensive. I have not observed in any of the unfiltered effluents from this process, which I have examined, any signs of putrefaction, but on the contrary a tendency to oxidise. The absence of sulphuretted hydrogen in samples of unfiltered effluents, which have been kept in stoppered bottles for three weeks, is also a fact of importance. By this process the soluble organic matter is reduced to a condition favourable to the further precipitation by natural agencies." Mr. Alfred Fletcher, F.C.S., F.I.C., Inspector under the Rivers Pollution Prevention Act, states:—"The result of my examination of this process has been to convince me of its efficiency in clarifying sewage, of removing smell, and in preventing putrefaction of the effluent. I am of opinion that such effluent as I saw at Crossness can be discharged into a river, or after passing through a thin layer of sand, even into a stream without causing any nuisance."

Analyses of Samples of Sewage treated by Webster's Electrical Process.

Parts per 100,000.

Description of Sample	Oxygen consumed	Free Ammonia	Albuminoid Ammonia		Chlorides	Notes
A) Mixture of 3 samples of raw sewage collected during time of treatment - - - -	2·292	1·9	0·65		44·4	Stank badly on 3rd day
B) Mixture of 3 samples of treated sewage flowing into tank before settling - - - -	0·917	1·75	0·6		37·2	Faint smell on 5th day
C) Same as sample A after settling 24 hours - - - -	—	1·64	0·4		—	Stank badly on 3rd day
D) Same as sample B after settling 24 hours - - - -	—	1·84	0·12		—	Faint smell on 5th day
No. 7. Average sample of raw sewage under treatment - - -	2·5	1·8	0·65		41·2	Stank badly on 3rd day
No. 8. Treated sewage after 2 hours' settlement in tank - -	0·583	1·08	0.07	Probably low as the samples had been kept	35·8	Perfectly sweet after 10 days
No. 9. Same as No. 8 after filtration through 6 inches of sand - -	0·536	1·00	0·06		35·6	ditto
No. 10. Treated sewage after 3½ hours' settlement in tank - -	0·5	1·28	0·05		35·6	ditto
No. 11. Same as No. 10 after filtration through 6 inches of sand -	0·5	0·91	0·01		35·6	ditto

The effluent produced by the electrical process, Mr. Webster states, contains about three grains per gallon of suspended matters, which consist almost entirely of oxide of iron, which is quite innocuous. Where this may be objectionable, from a sentimental point of view, it can be entirely removed by filtration through a few inches of sand.

The bacteria question is one which has probably still to be settled, but, in order to obtain some information as to the action of the iron compound produced by electro-chemical decomposition, some experiments were carried out, with the result that, after a given treatment, the whole of the bacteria were killed. In the case of experiments carried out in Paris, with ordinary treatment by means of iron electrodes, the results were as follows:—

	Raw Sewage	Effluent
Organisms per cubic centimetre,	5,000,000	600

In another experiment, in which the effluent was treated still further, all organisms were destroyed.

Unquestionably, this process of sewage treatment has many advantages, and may yet solve the vexed sewage problem.

Mr. Webster remarks further, "That it was while working with perchloride of iron, as a purifier of sewage that the importance of iron salts, in relation to organic matter, became apparent; and it was in connection with this chemical and free chlorine gas that the idea of electrolysis suggested itself."

THE "OXYGEN PROCESS."

A new process, which has had its birth in Ireland, and which promises to fully realise the expectation of its promoter, is the "Oxygen Process of Sewage Purification," devised by Mr. W. E. Adeney, F.I.C., and Mr. W. Kaye Parry, M.A., C.E. It has been submitted to an exhaustive investigation both in the laboratory and at some works at Monkstown, and the results have been successful. The process, moreover, has been examined in detail by the Chief Surveyor to the Board of Public Works, and has been selected by that body for the purification of the sewage of the Lunatic Asylum at Dundrum. To be brief, the results effected by this process are the complete separation of all matters in suspension in sewage, in a state suitable for air drying and utilisation as a manure, and an effluent of any degree of purity according to the circumstances of the locality to which it is applied may demand.

In this process the solid matters in the sewage are first separated from the soluble constituents by subsidence in a tank of special construction, no precipitating chemicals being employed. The destruction of the fermentable organic matters in solution in ordinary sewage is effected by taking advantage of the power which harmless micro-organisms, the germs of which are known to be widely distributed in the earth, air. and water, have, when growing under the most favourable conditions, of rapidly decomposing such matters into carbonic acid, water, ammonia, and also nitric acid. Under proper conditions these products result directly from the decomposition of the soluble fermentable matters in sewage, without any intermediate putrefactive fermentation being set up. The formation of offensive bodies is in fact entirely avoided in this process.

The essential condition for the healthy and rapid action of the organisms here referred to, is a plentiful supply of oxygen, free or combined. The necessary supply of oxygen is secured by a careful use of nitrate and manganate of sodium. One of the products of decomposition of the latter chemical is oxyhydrate of manganese; it is completely recovered by subsidence in a second tank, similar in construction to the one employed for the separation of the solid matters of the sewage. The recovered oxyhydrate of manganese may be dried and re-converted into manganate of sodium, and so may be used over and over again. It may also be employed for mixing with the solid matters of the sewage separated in the first tank to prevent putrefactive fermentation being set up in them during the process of air-drying them.

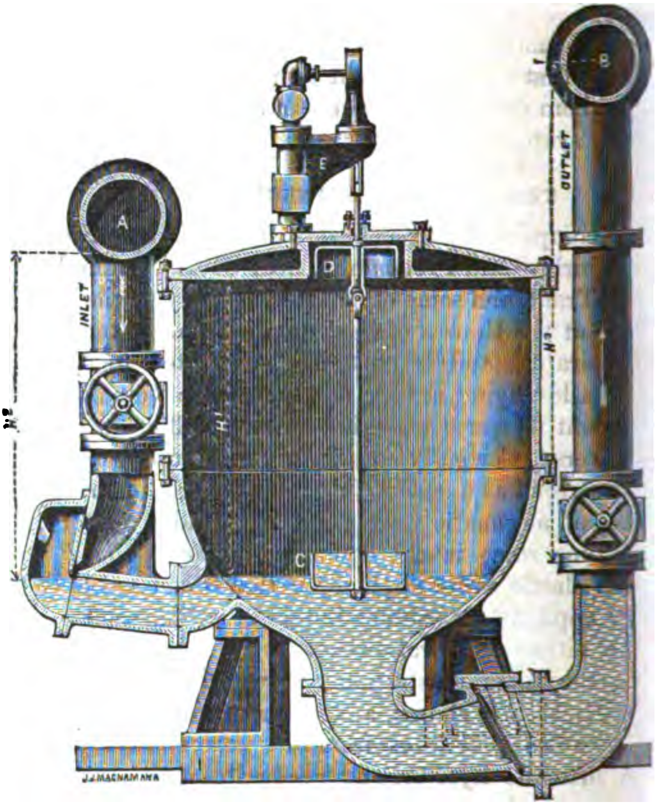
Another system,

THE SHONE HYDRO-PNEUMATIC SYSTEM

is also of comparatively recent date, and is in operation at Eastbourne, Shirley, and Freemantle, near Southampton, Lowestoft, Stoke-on-Trent, and some other thirty or forty towns in England, as well as at the Houses of Parliament. The system appears to work admirably, and is particularly adapted to districts and towns of a low-lying nature, and where the volume of sewage is insufficient to cause what is termed a self-cleansing velocity in the sewers. Correctly speaking, the Shone System might be better described as a successful method of getting rid of sewage by means of automatic sewage ejectors, and a writer described it some time since in the columns of *The Health Record* as a system so elastic in its application that it can not only be successfully applied to a solitary building, but is equally adaptable to towns, cities, and rural districts.

In the subjoined illustration, the working of the Automatic Sewage Ejectors is shown, and is carried out as follows:—

The sewage gravitates from the sewers through the Inlet Pipe A into the Ejector, and gradually rises therein, until it reaches the underside of the bell D. The air at atmospheric pressure inside the bell is then enclosed, and the sewage continuing to rise outside and above the rim of the bell compresses the enclosed air sufficiently to lift the bell, spindle, &c., which opens the Compressed Air Admission Valve E. The compressed air thus automatically admitted into the Ejector presses on the surface of the sewage, driving the whole of the contents before it through the bell-mouthed opening at the bottom, and through the Outlet Pipe B into the iron sewage rising main or hig level gravitating sewer, as the case may be. The sewage can only escape from the Ejector by the outlet pipe, as the instant the air pressure is admitted on to the surface of the fluid th valve on the Inlet Pipe A falls on its seat and prevents the flui escaping in that direction. The fluid passes out of the Ejector until its level therein reaches the cup C, and still continuing t lower, leaves the cup full until the weight of the liquid in th



Automatic Sewage Ejector.

portion of the cup thus exposed and unsupported by the su rounding water is sufficient to pull down the bell and spindl thereby reversing the Compressed Air Admission Valve, whi first cuts off the supply of compressed air to the Ejector, an then allows the air within the Ejector to exhaust down t atmospheric pressure. The outlet valve then falls on its se retaining the liquid in the sewage rising main; the sewage then flows into the Ejector through the inlet once more, driving the free air before it through the air valve, as the sewage rises, and so the action goes on as long as there is sewage to flow.

The valuable feature connected with the system consists in this—that by its aid the "separate system" of drainage can be carried out in the most perfect and sanitary manner possible, whether the district to be drained be flat, low-lying, tide-locked, or otherwise. All the chief sanitary engineers of the present day recommend the adoption of the separate system in preference to the combined system. But towns drained on the separate system now are few and far between, the reason being that the engineers who have designed the works could never get the hydraulic conditions necessary to cause the sewage to flow freely to what are called the outfalls; because it is well known that small volumes of sewage require to be turned into small sewers, having inclinations suitable to their sizes; and in flat districts the necessary inclinations can never be obtained.

In those districts hitherto drained by gravitation *per se*, the practice has been to construct big sewers at such gradients or inclinations as the configuration of the country or town would admit of. In dry weather, when only the sewage proper is discharged into such sewers, the volume is insufficient to cause what are called a self-cleansing velocity in the sewers, which then become sewers of deposit, and the large spaces within them not occupied by the sewage are more or less filled with foul air mixed with sewage gases, and these are permitted to escape haphazard into the streets under which they are laid, and into the houses with which they are connected.

In this manner unsanitary, and not sanitary, drainage works have been, and still are being, executed all over the world. But by the Shone System the most perfect hydraulic gradients can be secured throughout the whole area to be drained. Besides securing self-cleansing sewers by the Shone System, these sewers can be effectually ventilated by the action of the ejectors in a most simple but thoroughly scientific and practical manner.

It will be noted that the modern or later attempts to solve the sewage difficulty possess many features of practical interest, and I claim the indulgence of this Section if I have unduly trespassed on its time.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Report of the Hyderabad Chloroform Commission. With a Preface by SIR ASMAN JAH, K.C.I.E., Prime Minister of Hyderabad. Bombay: Printed at the *Times of India* Steam Press. 1891.

(Continued from page 321.)

THE conclusions of the Committee did not pass unchallenged. The Glasgow Chloroform Committee, consisting of Drs. John G. M'Kendrick, Joseph Coats, and David Newman, wrote as follows to the *Lancet*:—

"The Hyderabad Report, which appeared in the *Lancet* of January 18th, naturally attracted our attention and called for remark, especially as it seemed to traverse certain of our conclusions. On carefully reading the Report, it appeared to us that, so far as the facts are concerned, it generally confirmed our own observations as to the action of chloroform both on respiration and on the heart. Some of the inferences, however, are opposed to ours; but they are also opposed, as we believe, to the facts stated in the Report itself. We therefore propose to criticise the Report, and we would have done so immediately after its publication but for a request communicated to us that we should wait for the publication of the tracings on which the report is largely based. *We at once agree to postpone our remarks*, and only make this communication lest our silence should be misinterpreted."

In a footnote appended to this letter we read—"In spite of this statement the Glasgow Committee published their remarks one week before 'the publication of the tracings on which the Report is largely based.'"

It is unfortunate that the Report gave rise to a discussion in which a criticism of the experiments, how they were conducted and their value, degenerated into something like the bitterness of a theological controversy. The opponents of chloroform urged its rejection more forcibly than logically, and the issue to be tried seemed forgotten in the heat begotten of the dispute. Some eminent surgeons did contribute valuable material toward the mu disputed worth of chloroform, notably Dr. Macewen, whose Address as President of the Medico-Chirurgical Society of Glasgow, on the 31st of October, 1890, is one of the most valuable contributions to the study of anæsthetics we possess. Viewing the question from the clinical standpoint, this able surgeon says:—

> "Let the student study the physiological action of chloroform, learn that it is an agent which places the functions of the cerebro-spinal axis in abeyance, but does so *seriatim*, in a definite order, and which may, if pushed far enough, suspend them all. Let him be fully alive to its dangers, and how to counteract them, and let him recognise the safety zone of chloroform narcosis, and he will find it an anæsthetic powerful, it is true, but controllable, and though not infallible, yet a most valuable and useful servant. Meanwhile, chloroform is one of the safest and best anæsthetics, though it requires for its proper administration knowledge, skill, and assiduous attention."

The restoration to medical favour of chloroform was, at first, fraught with much danger to the public, and was injurious to the therapeutic reputation of the drug. Numbers of anæsthetists who formerly gave ether now disregarded it for its rival, and commenced chloroformisation without that knowledge and skill on which Dr. Macewen so properly lays stress, and very soon "Death under Chloroform" became a familiar heading in the London weekly medical journals.

As might be expected, an outcry against the use of the anæsthetic was raised by those opponents whose dislike to the drug had become crystallised into implacable hostility to its use.

No Commission had ever pronounced the drug to be innocuous. Every member of the medical profession who administered anæsthetics recognised that chloroform and ether were powerful drugs, and as such should be used with a full knowledge of the responsibility attending on their administration. Such knowledge can be attained only by study; it is not intuitive; and the study must take the form of carefully-conducted experiments and close clinical observation.

The question naturally arises, Were the Hyderabad anæsthetic experiments of such a nature as to command the approval of the members of the medical profession? Objection is taken to them on the grounds that the physiological effects of ether and chloroform on the lower animals are unsafe guides for their use on the human being; but hitherto no exception has been taken to similar experiments in the case of other drugs. Strychnin, digitalis, and the majority of our more potent medicines have been administered to the lower animals with the express object of learning from their physiological effects the therapeutic action and the value of the drug in human diseases.

The Nizam's Commission used the higher mammalia for experimentation, many of the experiments being performed on apes; and we do not see that a closer approach to the human being could well be made—it should be as satisfactory as experiments made on frogs. Yet those who readily accept the results of experiments made on the vascular system of frogs with digitalis and other drugs, and act on them in practice, cavil at those made on the higher mammalia with ether and chloroform.

The cavilling is not alone confined to the animals selected. We are told that the climate of the Deccan, by its high temperature, vitiates, or at least lessens the value of, the experiments. Chloroform, according to the objectors, is better suited to hot climates than to cold or temperate ones—an objection of little value, when we remember that in Scotland, as in the Deccan, chloroform has proven its great worth.

Again, the ground of objection is shifted, and we are told that the deductions of the Commission are contradicted by the experience of operative surgeons, and in proof of this contention we are referred to the current medical literature, where "Death under Chloroform is a frequent heading. For years past we have carefully examined home and foreign journals for records of deaths from anæsthesia, and we do not hesitate to say that they are much less numerous than is generally supposed. We find that when a death from chloroform is reported the case is freely copied. The fact that in the Indian Empire, the Colonies, the Western and Southern Commonwealths of the U.S.A., on the Continent of Europe, and throughout the great Southern Continent of America, chloroform is the favourite anæsthetic is a strong confirmation of the finding of the Hyderabad Commission. Used throughout the habitable globe, and manufactured in yearly increasing quantities, the drug is daily submitted by thousands of intelligent and interested observers to trial and bears the test. An occasional failure, it is true, now and then horrifies and intimidates a nervous anæsthetist, who promptly publicly recants and abjures the drug, and his conversion is hailed by the ether advocates "as a brand plucked out of the fire."

This is not the proper spirit in which to approach a scientific question. Medicine should be studied free from prejudice; to form theories from ascertained facts is allowable and desirable, but to twist facts to suit existing theories is unjustifiable.

The Edinburgh students taught by Syme found that, used as he directed, chloroform is a safe and reliable anæsthetic; but the same drug in the practice of some English and New England surgeons is declared to be most unsafe. A Commission sits to investigate the best means of ensuring safety under anæsthesia, and to decide on the relative merits of ether and chloroform. We have given their conclusions—conclusions which appear to us to be the natural outcome of the experiments, and in no sense of the word forced.

Nothing more distinctly shows the earnest desire of Surgeon-Major Lawrie and his colleagues to place the fullest information before the profession for their guidance on this great question than their including in the volume the replies made to their views. The ablest of the objectors, Mr. Alexander Wilson, of Manchester, writing in the *Medical Chronicle* of April, 1890, after summarising the opinions of Gibson, Wakley, Snow, and others on the question, writes:—

"There may be several objections taken to the unreserved application of the conclusions of these experiments to man.

"First, there is the difference which may exist in the action of chloroform on the heart of man and of animals. There is the possibility that the habits of life, the taking of stimulants and narcotics, especially the habitual use of drugs like tobacco—for the condition of the vagus centre is shown to be of great importance in relation to chloroform narcosis—may have some effect, if not in altering the behaviour of the heart muscle or its innervation, at least in modifying that chain of events upon which depends the absorption and distribution of the chloroform by the blood. Amongst other points of difference between man and the animals experimented on are the relation of the vital capacity to the size of the animal, and the interference with complete filling of its lungs, resulting from holding the animal.

"It has often been shown that the suddenly fatal cases are rare in human subjects in which there is any impediment to the free expansion of the chest—*e.g.*, Clover has pointed out that a phthisical patient is less likely to take a fatal dose of chloroform than one with healthy lungs, because his chloroform-absorbing capacity is diminished. Again, it has been noted that few patients die suddenly from chloroform, when it is inhaled lying on the side; also few, if any, sudden deaths are reported in cases of ovarian tumours. The explanation of these cases is that the interference with full expansion of the lungs by the position or the presence of the tumour prevents the lungs taking in the necessary fatal dose.

"On the other hand, the greater number of the suddenly fatal cases occur in people with healthy chests and large vital capacity—*e.g.*, in reducing dislocations of the shoulder, and in minor operations, such as teeth extraction, especially in those in which the patient, being in the natural upright position, can give the respiratory muscles full play, and completely fill the chest.

"Thus it is worth considering if the holding of a struggling animal, such as a dog, might not so interfere with its breathing as to prevent the full dose being taken, especially as the animal would not be likely to be held in its natural position. There is an indication in the Report that, in at least some cases, the holding of the animal did actually interfere with its respiration. If it did so in one case it probably did so in many, especially as a dog's thorax is so shaped that to hold its fore legs together in front of it, would prevent the complete expansion of its chest, and so prevent it suddenly taking a fair dose of chloroform vapour.

"In animals, too, we have an absence of the desire to inhale freely. In at least one reported case the wish to inhale the chloroform freely contributed largely to the fatal result.

"In chloroform accidents in man, of the very sudden variety, considered to be due to cardiac syncope, a certain set of conditions are present which are difficult to obtain in animals.

"The subject is generally young or middle-aged, with an expansile chest; the chloroform is willingly inhaled, quietly at first, until semi-unconsciousness is produced, when the fauces and glottis are insensitive; then, during struggling, with or without holding the breath, the patient, often in an upright or semi-upright position, and having his arms fixed by the assistants, which gives his respiratory muscles good purchase, gets one or two deep inspirations at the greatest advantage, and so obtains the maximum amount of chloroform.

"There is the desire to get under the influence of the drug the voluntary inhalation followed by the still steady conscious anxiety to inhale more, and then the involuntary deep inspiration, in the natural position in which a deep inspiration can be best taken.

"All these are conditions difficult to obtain in experiments on animals, and it is only under such conditions that the supposed cardiac paralysis has been produced in man.

"The interval between the stoppage of the heart and the respiration is so short that these points, trivial though they seem, may easily be of importance in modifying the result.

"It has always been maintained by the advocates of the syncope theory that it is only under certain circumstances, and by a certain definite combination of factors, that chloroform sufficient in quantity to paralyse the heart can be introduced into the blood, and that this particular combination of circumstances occurs very seldom—about once in every 1,000 or 2,000 administrations.

"Thus, as Dr. Snow pointed out years ago, the effect of chloroform on any given case varies with the amount contained in the blood at any given time.

"This depends upon the strength of chloroform vapour exhibited to the patient, the ease with which it is inspired through the glottis, and the depth and frequency of the inspirations; the amount actually absorbed depends upon the condition of the blood (its capacity for chloroform may vary), the time it stays in the lungs, the rapidity of the circulation, and other factors.

"The idea was that by certain combination of these several factors, the maximum quantity of chloroform was absorbed by the blood in the lungs and hurried to the heart, the next organ in the order of the circulation, not merely distending its cavities with chloroform-saturated blood, but also being distributed by the coronary arteries to every part of its substance, and so causing paralysis. This result is also assisted by the condition of distension of the heart and the venous condition of the blood.

"That the arrangement of these various factors—respiration, pulse, &c., has an important bearing in the action of the drug on the heart, is well shown by these experiments of the Commission. These showed that by varying the methods of administration in different experiments it was possible to make the heart cease beating at intervals of from one to twelve minutes after the cessation of the respiration. It is not impossible that by further variations the time might have been reduced until the stoppage was simultaneous with, or even preceded the cessation of respiration, and the experiments would have been thus made to accord with certain reported fatal cases in man.

"The cases in which the heart ceased soonest after the respiration were cases complicated with asphyxia—that is, cases in which semi-asphyxia was produced, presumably followed by deep inspiration; under these circumstances the heart ceased beating one minute after the respiration stopped. Now it is under conditions similar to these in man, that the so-called cardiac syncope occurs, and it is by working on these lines that attempts to produce it in animals should be made; but it appears that the Commission only made some four of these experiments, hardly a sufficient number upon which to base an important statement.

"In ordinary practice, the several conditions giving a fatal result from cardiac syncope are combined about once in every 2,000 or 3,000 administrations. Because the Commission did not obtain it in 600 attempts they conclude that it cannot exist. This is scarcely reasonable, especially as the bulk of their work was not upon the lines which promised the nearest result—viz., those of deep inspiration after semi-asphyxia.

"The manner or means by which the movement of the heart was tested are of some moment, as explaining the discrepancy between the results of experiment and practice. Most of the cases were tested by a needle introduced into the heart, or by opening the chest. These methods will indicate the merest quiver of the heart muscle—movements that would give no indication of their presence to ordinary observation, and movements that would probably be of no functional use—*i.e.*, in no sense contractions. It has been noticed by other observers, that the hearts of animals killed by chloroform show fibrillary irritability, after the heart muscle, as a whole, is incapable of contraction—a condition similar to this would indicate movement tested by the above, but such movement would be fallacious.

"It would be interesting to know the degree of action exhibited by the heart after cessation of the respiration. Was the power of propelling blood retained? If the action consisted only of muscular tremors it would be of little value, and hardly what is understood by action of the heart.

"The following case may be here quoted as a good example of the class of chloroform accidents, upon which is based the theory of the action of chloroform on the heart:—

"The patient was a strong, healthy labourer, who required an anæsthetic while some adhesions were broken down in his knee-joints: he had taken chloroform successfully three months previously. The case is reported by the surgeon who was superintending the administration of the anæsthetic. Chloroform was administered by a towel.—(*British Medical Journal*, 1884, Vol. II., p. 811.)

"'The patient showed not the least sign of nervousness . . . and commenced inhaling by several rapid shallow breaths, as if determined to get quickly under the influence of the anæsthetic. Following immediately upon the shallow movements were three or four deep inspirations. Feeling that this method must have entailed a large and rapid consumption of chloroform, I directed the house surgeon to remove the cloth, when the patient, *though still breathing*, was seen to have his eyes wide open, the pupils rapidly dilating, and the conjunctiva insensible. The face was neither livid nor pale; the lips, indeed, were of their normal pink hue, and the cheeks slightly flushed. In fact, beyond the condition of the eyes, there was nothing in the facial aspect to excite alarm. Up to this point, the time of the inhalation could not have exceeded one to two minutes. On feeling the right radial no pulse could be detected. The head was lowered, respiration then ceased; not, however, until three or four breaths had been drawn after the recognised cessation of the pulse. After the commencement of artificial respiration, the patient spontaneously made several gasps, but there were no further signs of vitality.'"

"This case is valuable because it is reported, not by the administrator of the anæsthetic, but by one who was merely watching the case, and who had ample time accurately to note the events which occurred; and the absence of struggling, so common in suddenly fatal cases, made the observation of the symptoms easy.

"Taken in conjunction with the numerous reported cases in which the patient passes suddenly from a condition of active struggling to a state of collapse, with gasping respiration and absence of pulse, it proves that chloroform, if it does not actually paralyse the heart, may cause death by some means equally sudden and certain; and that in such cases the heart is practically stopped, as far as its functional value is concerned, before the respiration. The case indicates also that observation of the respiration alone will not give adequate warning of danger, for the respiratory movements may be perfect one second and the next be on the verge of extinction, and hopelessly beyond recovery. It also shows that fatal damage may have been wrought on the system before there is any outward sign.

"This case is also noteworthy as contradicting the statements made by the first Hyderabad Chloroform Commission that, since 1856, no death from chloroform has occured in which the respiration and the respiration alone, was attended to throughout the administration.

"The patient was breathing perfectly, and there was no sign of respiratory failure when the administration was suspended, so that was the respiration alone observed it would only have signalled any danger some seconds later. There can be little doubt but that the pulse in such a case, where the patient was quiet and breathing tranquilly, would have exhibited some decided alteration had it been observed.

"In the second portion of the Report it is shown that the essential action of chloroform on the system is to cause a fall in the mean blood-pressure. This fall is proportionate to the amount of chloroform inhaled and absorbed into the system. [It would have been interesting to have known the relation, if any, the condition of the blood-pressure bore to the state of anæsthesia.]

"This fall in blood-pressure bears some relation to the respiration, but what this relation is is not distinctly stated, and the cause of the fall in pressure is also not clearly assigned, except (Sec. 19) that it is not due to the direct action of chloroform on the heart, and must be due to paralysis of the vaso-motor centre. This is important when taken in conjunction with the following parts of the Report (Sec. 3): ' . . . If the chloroform is pushed further there comes a point not easy to define when the blood-pressure and respiration will no longer be restored spontaneously, although the heart continues to beat after the inhalation has stopped.' And also (Sec. 25): '. . . . It is never in any case certain that artificial respiration will restore the natural respiration and blood-pressure, *no matter how soon it is commenced* after the respiration stops.'

"This exposes a comparatively new and insidious danger in chloroform administration, and one as difficult to treat as the old cardiac syncope. It is quite conceivable that under certain circumstances the dose necessary irretrievably to damage the vaso-motor centre may be inhaled with extreme rapidity, and that while the respiration and pulse are still present the centre may be almost paralysed before such warning has been given.

"From a record of fatal cases in man, it appears possible that this paralysis may, in certain conditions, be effected almost instantaneously, and before complete insensibility has been produced.

"In Section 20 injection of chloroform into the jugular vein caused no paralysis of the heart. It should be noted that this is not the most direct channel by which the heart can be reached; and the experiment, when compared with inhalation, is open to criticism. Chloroform injected into the jugular vein passes with the venous blood to the right auricle, where it is mixed with the blood of the inferior vena cava from the liver; from the right side of the heart it passes to the lungs, where the chloroform, being volatile, and the air in the alveoli of the lungs free from chloroform, a good deal may be lost; finally, what remains of it reaches the heart.

"Chloroform given by inhalation is much more likely to reach the heart directly in large doses passing into the air cells; about one-fifth of the whole blood of the body is at once exposed to it. This blood, saturated with chloroform and unmixed with any non-chloroformed blood, goes direct into the left auricle and ventricle, and by the coronary arteries is first distributed into the very substance of the heart itself. As Dr. Snow puts it: 'In inhalation the heart is always a little in advance of the rest of the body as regards the amount of chloroform vapour to which it is subjected.' Chloroform thus given by inhalation may have a more potent action than when injected into a vein, and the results of the two methods cannot well be compared.

"In Section 12 the effect described as that of asphyxia on the blood-pressure, in causing a rapid fall of blood pressure and slowing of the heart beat, is contrary to the received ideas on the subject. ('Human Physiology.' Landois and Stirling. 1888 edition, p. 198). During asphyxia, 'the blood-pressure measured in a systemic artery—*e.g.*, the carotid—rises very rapidly and to a great extent during the first and second stages; the pulse beats are at first quicker, but soon become slower and more vigorous. The rise in pressure is due to stimulation of the general vaso-motor centre by the venous blood, and the slow beating of the heart to the action of the venous blood, on the cardio-inhibitory centre in the medulla.'

"The attempts to produce shock during the inhalation of chloroform (Sec. 33) uniformly failed. In experimenting on animals there are several sources of error. In the first instance, it is doubtful if animals suffer as much from shock as man, there is an absence of mental terror and the depressing effect of the anticipation of the operation, &c.

"It is well known that the extraction of a single tooth in a state of semi-anæsthesia may produce a considerable amount of shock and a painful mental impression that lasts for weeks—an amount of shock far greater than would have been felt had no anæsthetic been exhibited.

"The lowering of the blood-pressure in the case of a fatty heart (Sec. 39) cannot be altogether an advantage in chloroform administration. It must, by the efforts the heart makes to keep up the pressure, increase the work of the heart, and at the same time diminish the blood supply to the heart itself.

"It is important to note that in all these experiments there are double and treble reactions, which, though they have a beneficial effect in diminishing the amount of chloroform absorbed, are in themselves elements of danger.

"Thus semi-asphyxia and inhibition of the heart are elements of safety by preventing the 'intake' and distribution of chloroform, but the ultimate result of this is to cause rapid breathing and quick pulse, which, by the extra 'intake' of chloroform and the quick distribution of that already inhaled, is an element of danger.

"This change from a slow to a rapid pulse may be attended with very nearly fatal results, as is shown in Sec. 34, where an animal was nearly killed by a short inhalation, from the inhibition of the vagus having been stopped, and a more rapid pulse consequently resulting. This fall in pressure is in itself, in feebly nourished subjects, a source of danger, causing syncope from cerebral anæmia.

"There is a peculiar animus against the feeling of the pulse displayed by Surgeon-Major Lawrie in the first Report, and not entirely absent in the second. He goes so far as to state, 'that since the year 1855, in Great Britain, there is no death from chloroform recorded in which it was proved that the respiration alone was attended to throughout the inhalation.' This is surely a mistake; there are several fatal cases where the respiration only was attended to, one of which is quoted here, and there are many more in which respiration was attended to as fully as possible.

"Then reference is made to the teaching of what are termed antagonistic schools: Syme taught—'We are guided as to the effect of the chloroform not by the circulation, but entirely by the respiration.' Erichsen teaches: 'When fully anæsthetised the patient requires the most careful watching by the person who administers the chloroform; his finger should never be off the pulse, nor his eye taken away from the countenance of the patient."

"Surgeon Lawrie considers these opinions 'absolutely irreconcilable.'

They are nothing of the kind. Erichsen's directions are only a little fuller and more complete than Syme's, and not incompatible with his.

"I do not know the wording of the earlier editions of Erichsen, but in recent ones (edition of 1884, Vol. I., p. 24), in addition to the words quoted it is stated, 'the breathing must be carefully observed.' It is unlikely that it is not mentioned in some part of the earlier editions, especially as Dr. Snow, with whose works Mr. Erichsen would no doubt be familiar when writing the above, constantly emphasises the necessity for observing the state of the respiration and in reference to this point says:—'The importance of attending to the respiration of the patient has previously been noticed, and it is so obvious a symptom that it can hardly be disregarded if any one is watching the patient; it speaks, moreover, almost to one's instincts, as well as to one's medical knowledge.' ('Snow on Anæsthetics,' p. 258, 1888).

"Apart from any action which chloroform may have on the heart itself, the experiments made supply abundant reason for a careful observance of the pulse during the administration of the drug, and it is surprising that this point has not been referred to in the Practical Conclusions. Its omission looks suspiciously like the result of prejudice against it.

In the Report it is shown that the amount of chloroform inhaled (the 'intake') depends upon the respiration, but that the effect of this 'intake,' the way in which it is utilised, lies with the circulation, with the force and rapidity of the pulse or the reverse.

"It is shown that, with a slow pulse, concentrated chloroform vapour can be exhibited with impunity, but with a full, bounding pulse dilute chloroform vapour may be dangerous. These variations occur in practice, from the quick full pulse of a patient with a high temperature to the slow pulse of a patient with jaundice.

"There have been fatal cases in man distinctly due to a non-consideration of these points. [Case reported in *British Medical Journal*, 1887, Vol. II., p. 951, where ether was given first, and then a small dose of chloroform proved fatal.] This is again illustrated in Experiment 177, Section 34, where sudden quickening of the pulse, from cessation of vagus inhibition, suddenly placed the animal in a condition of 'extreme and unexpected jeopardy.' Yet from some reason, though stress is laid upon these points in the Report, they are omitted from the Practical Conclusions. This is the more strange, as the Commission certainly proves that the circulatory apparatus is first influenced by the chloroform, and it by vaso-motor paralysis that death is caused. Why, then, disregard it in administering the drug?

"As attention to the pulse is so easily managed without neglect of the respiration, and a proper knowledge of the state of the circulation has been proved to be most essential to the intelligent administration of a anæsthetic, it is advisable that the pulse should always be observed; it can, at least, do no harm, and, in conjunction with the respiration, is a valuable help, quite apart from any information it gives of the general condition of the patient.

"The assistant in charge of the anæsthetic must endeavour to be more than a mere doler out of innocuous doses of chloroform; he should keep himself in touch with the whole condition of the patient all through the operation.[a] To endeavour to narrow his work to mere watching of the respiration is mistaken policy.

"In reference to the question of cardiac *versus* respiratory paralysis, the following remarks appeared in the *Lancet* for September 21, 1889:—

"'In the Scotch capital, failure of respiration is regarded as the chief or only danger; while in the metropolis, failure of the heart is more feared. It is quite possible that the surgeons in both cities are right, and that the habits or mode of living of the people may lead to differences in resisting power of the cardiac or respiratory apparatus respectively. The proportion of gouty patients is much larger in London than in Edinburgh, and when we consider that the natives of India appear to resemble the Scotch in their comparative immunity from cardiac paralysis by chloroform.' . . . . As most cases of death from chloroform are put down as due to cardiac paralysis, and this is said to rare in Scotland, the impression is conveyed that fatal cases of chloroform narcosis are unknown or rare in that country, and there is certainly an idea abroad to this effect. It is not necessary to resort to a comparison of the habits of the people to explain their immunity from fatal results.

"In Scotland fewer people die from chloroform, simply because fewer people inhale it. A population of 3,991,499 must necessarily give fewer chances for the administration of chloroform than one of 28,247,151 and consequently fewer possibility of fatal cases. Another point is, that such cases as do occur are not always, from the absence of coroners' inquests, brought to light, a large number, if not the majority, of the fatal chloroorm cases in England, owing their publicity to the newspaper reports of he coroners' inquests.

"But deaths from chloroform *do* occur in Scotland and even in Edinburgh. A casual search in the medical journals gives the following figures: Edinburgh Royal Infirmary (1878 to 1880), three deaths; Western (Sir George Macleod's Hospital) Infirmary, Glasgow (1883 to 1885), three deaths; Royal Infirmary, Glasgow (1883 to 1885), two deaths; other parts of Scotland (1881 to 1883), six deaths. England, 10 deaths; Scotland, 14 in same period. England, population 28,247,151; Scotland, 3,991,499.

"In summing up the results of the latest Commission on chloroform it s to be remembered that, in the opinion of many persons, as regards th first part of their work—viz., the investigation of the point, does chloroform paralyse the heart? nothing new has been added to our knowledge.

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[a] *Vide* Note by the Commission at the end of Mr. Wilson's article.

"The result has been to confirm the work of some of the previous experimenters, but without explaining how the theory of cardiac paralysis appeared to be borne out by the experiments of Dr. Snow. There has always been since the discovery of chloroform sufficient evidence to prove that it is very difficult, if not impossible, to produce sudden cardiac paralysis by it in animals, and an equal amount of clinical evidence to justify the supposition that such can occur in man.

"To estimate the value and importance of the second part of the Report, it must be noticed that the action of chloroform on the heart was (by the advocates of this anæsthetic) considered to be the *only* objection to its general use. It was this supposed power of causing irremediable cardiac paralysis which made people afraid of it. If this property could be shown to be non-existent the harmlessness of the drug would be established.

"This is easily understood, from the facts that artificial respiration is so readily carried out, and cessation of respiration remedied by artificial respiration so common, that the impression is prevalent that it is easy to breathe for a person, but the remedying of the cessation of the heart-beat presents insuperable difficulties.

"It was not imagined that chloroform might possess other dangers—it is for a knowledge of these that we are indebted to the Commission—viz., the importance of the part played by vaso-motor paralysis in the causation of death, and the fact that the paralysis of the respiratory centre may be final at the moment that attention is drawn to the cessation of respiration.

"If the conclusions of the Commission are accepted in full without reserve, chloroform has no power of paralysing the heart; one danger is removed, but it is replaced by one as great in every respect—viz., paralysis of the vaso-motor centre. This may set in very suddenly, with hardly any warning; it is as far beyond treatment as cardiac paralysis, and it is as fatal. If the cardiac paralysis from chloroform does not exist, vaso-motor paralysis must have been the cause of the numerous deaths recorded against chloroform; and how sudden and irremediable this is the reports of fatal cases abundantly testify.

"When death occurs from vaso-motor paralysis it is clearly imaginable that the vaso motor centre may be hopelessly damaged or rapidly reaching that stage, while the pulse is still present and the heart attempting to keep up the pressure. So that for some seconds there may be a deceptive condition in which both pulse and respiration are present, yet a fatal termination is imminent. That this death from vaso-motor paralysis does occur in man is shown by the very rapid running pulse mentioned in some cases as preceding the fatal termination.

"The extensive experiments of the Commission have left the chloroform question in the following condition: It was not found possible to directly paralyse or affect the heart by chloroform in some 600 administrations. Death from chloroform is due apparently to paralysis of the vaso-motor and respiratory centres—probably one or both of these may be affected. When death occurs it is the result of an overdose of the drug.

"It cannot be too strongly insisted that the work of the Commission gives us no greater confidence in chloroform than we had before. That it does not cause cardiac paralysis is no safeguard, since it produces as sudden and equally fatal vaso-motor paralysis, and respiratory paralysis in addition. Its physical and chemical properties remaining the same, the danger of permitting the patient to inhale an overdose will remain as great as ever.

"In the Practical Conclusions no directions are given for its administration beyond those which have been in use for years, and in the presence of which so many fatalities have occurred, either from vaso-motor, cardiac, or respiratory paralysis.

"In the face of these it is hardly to be expected that the deaths from chloroform will much diminish."

This by far the ablest adverse criticism of the work of the Commission gained weight from the scientific spirit in which the article had its genesis, the moderate language in which the objections were stated, and the recognised worth and high standing of the magazine in which the contribution appeared.

Fortunately the reply fell into the hands of one very familiar not alone with the working of the Committee but with the whole literature of the subject, and soon after Mr. Alexander Wilson's review appeared, Surgeon-Major Lawrie replied as follows:—

"In the *Medical Chronicle* of February, 1890, there is an ably-written review of the Hyderabad Commission's Report on 'Chloroform,' signed 'Alexander Wilson.' The review ends thus:—'Increased knowledge has added nothing new to the directions for its' [chloroform's] 'administration.' I hope that on consideration Mr. Wilson will see fit to modify this statement, which is inconsistent with fact.

"The Hyderabad Commission was appointed to confirm or disprove yme's and Simpson's principles that we should be guided as to the effect f chloroform entirely by the respiration. The Commission has not only roved that these principles are sound, but has also proved that the art f administering chloroform with safety consists in keeping the breathing bsolutely regular throughout the inhalation. This proof is new, and has ever been established before. As far as I am aware there is no text-book on surgery of the present day, except Sir Joseph Lister's article in 'Holmes's Surgery,' that does not recommend that the pulse as well as the respiration should be watched for signs of the effect of chloroform, and it is new to prove, as the Hyderabad Commission has proved, that to watch the pulse at all is both wrong and dangerous.

"The photograph of two original tracings of Experiment No. 186 which accompanies this paper demonstrates the futility of attention to the pulse in chloroform administration. For example, in Tracing III., Ludwig, though the pulse of the dog experimented on was apparently much better at 2 hours 55 minutes than at 2 hours 54 minutes, it was not really so. Dr. Gaskell has shown that when the blood-pressure is high the pulse must necessarily be better than when the blood-pressure is low. The pressure at 2 hours 54 minutes was much higher than at 2 hours 55 minutes, and the pulse was therefore in reality better in proportion, though it was smaller in the tracing.[a] On the other hand, the danger of waiting for signs in the pulse of failure of the heart under chloroform is well shown in the Tracing IV., Ludwig, at the end of which the failure of the pulse at 3 hours 19 minutes 15 seconds, was a sign of impending death.

"The two tracings demonstrate all that it is possible to know regarding the safe administration of chloroform, and are well worth careful examination. (Everything which occurred in the experiments was marked and recorded on the tracings as the drum revolved, and nothing except what is written in red ink[b] was added afterwards). The most remarkable points they exhibit are (*a*) the uniformly gradual and regular fall of blood-pressure which occurs when chloroform is administered in such a way that the breathing is perfectly regular, and (*b*) the entire absence of danger if the administration is stopped when the animal or patient is 'under.' Formerly we were told that chloroform lowers the blood-pressure; that this in itself shows that its administration is dangerous; and that occasionally the fall is so unexpected and capricious as to produce sudden death by stoppage of the heart. The Hyderabad Commission has shown (1) that the lowering of the blood-pressure, which chloroform and all anæsthetics cause when efficiently administered, is in itself a harmless event, if the respiration alone be attended to and taken as a guide, and if the administration be stopped when the patient is fully anæsthetised; and (2) that the sudden falls of pressure which the Glasgow Committee asserted are dangerous, and attributed to chloroform, are due to stimulation of the vagus, and, by slowing the circulation, are a safeguard against overdosing. The Hyderabad Commission has further proved that all irregularities in the fall of the blood-pressure and in the circulation under chloroform, including such an irregularity as dilatation f the heart, which never occurs when chloroform is administered roperly, are due to improper administration, with irregular breathing nd insufficient air.

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[a] This statement is open to correction.

[b] Black in the diagram.

"There is no loophole of escape for the opponents of principles which yme long ago showed to be essential for safety in the administration f chloroform. Tracings 3 and 4 of Experiment No. 186 of March 6th, 1890, were not produced accidentally, but are examples of what happens n every case of chloroform inhalation without exception, whether in an or in animals, where the breathing is perfectly regular. Anyone who is taught to give chloroform in the right way can obtain the same equence of events clinically, which the tracings pourtray experimentally; and I undertake to produce them invariably in any laboratory or erating room in the world. My students do it here every day, and if we an do it anybody can do it. The irregularities in the tracings of the lasgow Committee, and Professor Macwilliam's more recent bogey of latation of the heart, are due to obstruction of the circulation in the lungs rough interference with, or irregularity of, the respiration. The proof f this is furnished by the experimenters themselves. The Glasgow Comttee state that in their experiments the anæsthetic was administered in a th, *saturated with chloroform*, held over the face—*i.e.*, with insufficient r. In Professor Macwilliam's experiments the chloroform was pumped to the lungs with bellows. Professor Macwilliam states that only a rtain percentage of chloroform, 1 to 5 per cent., was allowed to get to the air in the experiments he performed in this manner. Before e can accept his conclusions, however, he is bound to demonstrate that r containing from 1 to 5 per cent. of chloroform, blown into the rachea with bellows, is incapable of producing obstruction of the circution or respiration in the lungs. Obstructed circulation in the lungs nd a rapidly falling blood-pressure are more than enough to account r the dilatation of the whole heart, which occurred in his experiments, nd which he wrongly attributed to the direct action of chloroform. It is amusing to contrast Professor Macwilliam's statements regarding the anger of dilatation from the direct action of chloroform on the heart in e laboratory with Dr. James Dunlop's clinical experience, as narrated the *Lancet* of September 27th, 1890, that in typical cases of death m the direct action of chloroform the heart is empty and flaccid. rhaps Mr. Alexander Wilson will assert that Professor Macwilliam's tements 'are only a little fuller and more complete' than Dr. Dunlop's, and that they are 'not incompatible,' which is the view he takes f Erichsen's teaching that the pulse should always be taken as a guide, d Syme's teaching that it should never be taken as a guide in chloroform administration.

"I am satisfied to leave the question of chloroform administration to e judgment of the readers of the *Medical Chronicle*. I have always understood that, next to saving life, the prevention and relief of pain are among the most important duties of our profession. According to the teaching of the Hyderabad Commission, pain may safely be prevented and relieved with chloroform by any intelligent and properly taught medical practitioner; and there can be no question that every medical man ought to be able to give a dose of chloroform with as much precision and certainty as a dose of morphine, or of any other poison. The practical outcome of the disastrous teaching of the Glasgow Committee, backed up by Professors Wood and Macwilliam, is that the relief of pain by chloroform is to be handed over to specialists, who alone are to administer it, though their own declarations and statistics show that they cannot give it with safety. Exactly in proportion as this teaching gains ground the bulk of the profession suffers loss in credit and in pocket, and the advantages chloroform confers are most seriously restricted and curtailed. There is no more necessity for the anæsthetist, with his inhaler and other apparatus, than for a hypodermic morphia injectionist, or other poisonist. If the anæsthetist is to be tolerated hereafter at all, it must be because he is a man of pleasant presence and cheerful countenance, who knows how to comfort and re-assure the patient until chloroform oblivion is secured."

Part IX. deals with clinical results. Since the completion of the experiments of the Commission a system of note-taking in chloroform administration has been in operation in the Afzulgunj Hospital.

In the first 272 cases in which an accurate record of chloroformisation was kept, the notes were taken by students. The average time to produce anæsthesia in these cases, which include children and adults, was 3m. 44s. In 82·9 per cent. abolition of the corneal reflex, in 16·8 per cent. stertorous breathing, and in 1 case complete relaxation of the muscles, was the first sign of full anæsthesia. "There was no instance of respiratory embarrassment or of accident or delay of any kind due to overdosing, and the patient was never allowed to inhale the anæsthetic while the breathing was in any way irregular."

The administration of chloroform in the Afzulgunj Hospital is now conducted in the following manner. When all is ready for the operation, the surgeon gives the signal to begin the inhalation, for which Surgeon-Major Lawrie gives the following rules:—

"(1) The chloroform should be given on absorbent cotton stitched into an open cone or cap.

"(2) To ensure regular breathing the patient, lying down, with everything loose about the neck, chest, and abdomen, should be made to blow into the cone held a little distance from the face. The right distance throughout the inhalation is the nearest which does not cause struggling, or choking, or holding of the breath. Provided no choking or holding of the breath occurs, the cap should gradually be brought nearer to, and eventually may be held close over, the mouth and nose as insensibility deepens.

"(3) The administrator's sole object while producing anæsthesia is to keep the breathing regular. As long as the breathing is regular, and the patient is not compelled to gasp in chloroform at an abnormal rate, there is absolutely no danger whatever in pushing the anæsthetic till full anæsthesia is produced.

"(4) Irregularity of the breathing is generally caused by insufficient air, which makes the patient struggle or choke or hold his breath. There is little or no tendency to either of these untoward events if sufficient air is given with the chloroform. If they do occur the cap must be removed and the patient must be allowed to take a breath of fresh air before the administration is proceeded with.

"(5) Full anæsthesia is estimated by insensibility of the cornea. It is also indicated by stertorous breathing, or by complete relaxation of the muscles. Directly the cornea becomes insensitive, or the breathing becomes stertorous, the inhalation should be stopped. The breathing may become stertorous while the cornea is still sensitive. The rule to stop the inhalation should, notwithstanding, be rigidly enforced, and it will be found that the cornea always becomes insensitive within a few seconds afterwards.

"It is only necessary to add that the patient should be so dressed for an operation that his respiratory movements can be seen easily by the chloroformist. In the climate of India this is not difficult to manage, but it is difficult to manage in the climate of Europe; so that in this respect, and in this respect alone, the chloroformist in England is placed at a distinct disadvantage compared with the chloroformist in India. Proceeding in the above way chloroform never produces any bad effects, and its administration, in any case which is fit for an operation, is entirely free from danger."

And the following Practical Conclusions are given at page 395:—

"I. The recumbent position on the back and absolute freedom of respiration are essential.

"II. If during an operation the recumbent position on the back cannot, from any cause, be maintained during chloroform administration, the utmost attention to the respiration is necessary to prevent asphyxia or an overdose. If there is any doubt whatever about the state of respiration, the patient should be at once restored to the recumbent position on the back.

"III. To ensure absolute freedom of respiration, tight clothing of every kind, either on the neck, chest, or abdomen, is to be strictly avoided; and no assistants or by-standers should be allowed to exert pressure on any part of the patient's thorax or abdomen, even though the patient be struggling violently. If struggling does occur, it is always possible to hold the patient down by pressure on the shoulders, pelvis, or legs without doing anything which can by any possibility interfere with the free movements of respiration.

"IV. An apparatus is not essential, and ought not to be used, as, being made to fit the face, it must tend to produce a certain amount of asphyxia. Moreover, it is apt to take up part of the attention which is required elsewhere. In short, no matter how it is made, it introduces an element of danger into the administration. A convenient form of inhaler is an open cone or cap with a little absorbent cotton inside at the apex.

"V. At the commencement of inhalation care should be taken, by not holding the cap too close over the mouth and nose, to avoid exciting struggling, or holding the breath. If struggling or holding the breath do occur, great care is necessary to avoid an overdose during the deep inspirations which follow. When quiet breathing is ensured as the patient begins to go over, there is no reason why the inhaler should not be applied close to the face; and all that is then necessary is to watch the cornea and to see that the respiration is not interfered with.

"VI. In children, crying ensures free admission of chloroform into the lungs; but as struggling and holding the breath can hardly be avoided, and one or two whiffs of chloroform may be sufficient to produce complete insensibility, they should always be allowed to inhale a little fresh air during the first deep inspirations which follow. In any struggling persons, but especially in children, it is essential to remove the inhaler after the first or second deep inspiration, as enough chloroform may have been inhaled to produce deep anæsthesia, and this may only appear or may deepen after the chloroform is stopped (*vide supra* sub-paragraphs 2 and 9 of Conclusions in paragraph 30). Struggling is best avoided in adults by making them blow out hard after each inspiration during the inhalation.

"VII. The patient is, as a rule, anæsthetised and ready for the operation to be commenced when unconscious winking is no longer produced by touching the surface of the eye with the tip of the finger. The anæsthetic should never, under any circumstances, be pushed till the respiration stops; but when once the cornea is insensitive, the patient should be kept gently under by occasional inhalations and not be allowed to come out and renew the stage of struggling and resistance.

"VIII. As a rule, no operation should be commenced until the patient is fully under the influence of anæsthetic, so as to avoid all chance of death from surgical shock or fright.

"IX. The administrator should be guided as to the effect entirely by the respiration. His only object, while producing anæsthesia, is to see that the respiration is not interfered with.

"X. If possible, the patient's chest and abdomen should be exposed during chloroform inhalation, so that the respiratory movements can be seen by the administrator. If anything interferes with the respiration in any way, however slightly, even if this occurs at the very commencement of the administration, if breath is held, or if there is stertor, the inhalation should be stopped until the breathing is natural again. This may sometimes create delay and inconvenience with inexperienced administrators, but experience will make any administrator so familiar with the respiratory functions under chloroform that he will, in a short time, know almost by intuition whether anything is going wrong, and be able to put it right without delay before any danger arises.

"XI. If the breathing becomes embarrassed, the lower jaw should be pulled, or pushed from behind the angles, forward, so that the lower teeth protrude in front of the upper. This raises the epiglottis and frees the larynx. At the same time, it is well to assist the respiration artificially until the embarrassment passes off.

"XII. If by any accident the respiration stops, artificial respiration should be commenced at once, while an assistant lowers the head and draws forward the tongue with catch-forceps, by Howard's method, assisted by compression and relaxation of the thoracic walls. Artificial respiration should be continued until there is no doubt whatever that natural respiration is completely re-established.

"XIII. A small dose of morphia may be injected subcutaneously before chloroform inhalation as it helps to keep the patient in a state of anæsthesia in prolonged operations. There is nothing to show that atropine does any good in connection with the administration of chloroform and it may do a very great deal of harm.

"XIV. Alcohol may be given with advantage before operations under chloroform, provided it does not cause excitement, and merely has the effect of giving a patient confidence and steadying the circulation."

While the inhalation is proceeding no one is allowed to do anything in the operating room, not even speak, and everybody's attention is thus concentrated on the administration until the patient is fully anæsthetised. From the moment the inhalation is commenced until anæsthesia is produced, the surgeon records every event, even of the most trivial kind, with the exact time of its occurence.

To these excellent directions Surgeon-Major Lawrie adds the following statement, which we would like to see illuminated and hung in every operating room:—

"Normal respiration is compatible with normal inhalation and normal anæsthesia."

As an example of the note-taking during chloroformisation we give the following case:—

"August 24th, 1891.—No. 279.

"Temperature of room 73·1° F. Healthy Hindoo male, Kissensingh, ætat. 40. Disease—necrosis of the lower jaw. Operation—removal of dead bone. Chloroformed by student Krishtiah at 8h. 52m. 0s. Full anæsthesia at 8h. 59m. 55s.; the administration was slow on account of bleeding into the mouth. (A probe had been introduced into the sinus before the operation was decided on).

"*Observations.*

	H.	M.	S.
"A.	8	52	0.—Chloroform on cap; blowing regularly.
"B.	8	53	5.—Cap brought close to face.
"C.	8	54	30.—More chloroform; two breaths of fresh air.
"D.	8	55	40.—Noisy expiration.
"E.	8	56	20.—Coughing violently; one breath of fresh air.
"F.	8	57	20.—More chloroform on cap; two breaths of fresh air.
"G.	8	59	55.—Cornea insensitive; administration continued till 9h. 4m. 55s."

We have devoted an unusually large amount of space to the notice of this great work, which is at once one of the most practically useful and scientifically accurate of modern medicine. It commands respect from all readers, both for its originality and for the painstaking and trustworthy record which it contains of the numerous, well-devised, and instructive experiments which the able scientists of the Commission so successfully carried out.

That the Commission has rehabilitated chloroform in the good opinion of the medical profession is known to all, but we venture to say it has done much more—it has placed the value of chloroform on a scientific basis, firm as the everlasting hills.

GEORGE FOY.

Text-book of the Principles and Practice of Medicine. By the late CHARLES HILTON-FAGGE, M.D., F.R.C.P., Physician to, and Lecturer on Pathology in, Guy's Hospital; Examiner in Medicine in the University of London; and PHILIP HENRY PYE-SMITH, M.D., F.R.S., Fellow of the Royal College of Physicians; Physician to, and Lecturer on Medicine in, Guy's Hospital. Third Edition. London: J. & A. Churchill. 1891. 8vo. Vol. I., pp. 1186. Vol. II., pp. 1023.

THE posthumous first edition of Dr. Hilton-Fagge's great work was reviewed at length in the number of this journal for January, 1887 (Vol. LXXXIII. No. 181. Third Series, page 84). A second edition was published in 1888, in which large additions were made to the sections in the second volume on Diseases of the Heart, Pneumonia, Intestinal Obstruction, Diseases of the Liver, Anæmia, and Diseases of the Joints. At the same time, in the first volume, chapters were added, or re-written, on Pyæmia, Enteric Fever, Febricula, Vaccinia, Rubeola (Rötheln), Actinomycosis, Peripheral Neuritis, Friedreich's and Thomsen's Diseases, Insular Sclerosis, and Insanity—this last chapter being written by Dr. G. H. Savage.

The present, or third, edition saw the light in July, 1891, and should long since have been reviewed in our pages. For the delay we tender an apology to Dr. Pye-Smith, whose name and fame are now more than ever identified with this splendid and classical work. In his preface he indicates the chief alterations in the new edition. The introduction has been re-written. The treatment of enteric fever and of diphtheria, and the pathology of cholera and ague, have been considerably expanded. The chapters on diseases of the heart have been revised and, in great part, re-written. The chapter on phthisis has been in parts condensed, in others expanded. "It had been already sent to press some time before the publication (at once, too late and too early) of the method of treatment by inoculation, introduced by the eminent discoverer of the essential nature of this disease, as well as (in all probability) of that of cholera." It is naïvely added: "The circumstances, however, of the announcement and practice of this method were such, and the disappointment of the hopes at first existed [? excited—ED.] has been so great, that the omission is, perhaps, not to be regretted."

The accounts given of influenza, diabetes, and anæmia, have in particular been brought up to date. As regards influenza, we are, however, surprised to find it still described under the heading, "Catarrhal Disorders of the Air Passages," in company with coryza, ozæna, hay fever, whooping-cough, and asthma. Surely, influenza, at all events, would more fitly find its place among the specific infectious diseases, "affecting the whole body and accompanied by fever." The specificity of whooping-cough also admits of no question, and is, indeed, fully acknowledged by the authors when they write: "The *incubation* of whooping-cough after infection is, perhaps, variable—probably a fortnight as a rule, but often less."

One of the distinctive features of this great work is the introduction into both volumes of very full indexes of both subjects and authors. This is a convenience of the first importance to the reader. Another innovation of more questionable utility and taste is the superscription of each chapter with a classical or poetical quotation. In some instances, no doubt, these quotations are thoroughly appropriate—for example, in the chapter on "Inflammation," where the definition of Celsus is given—"Notæ vero inflammationis sunt quatuor: rubor et tumor, cum calore et dolore." Sometimes, however, the quotation excites a sense of the ridiculous, as when we read, under "Varicella," Dryden's lines:

> "Each little pimple had a tear in it,
> To wail the fault its rising did commit;"

or, under "Chronic Deep Inflammations and Hypertrophies" of the skin, from Shakspeare's *Henry V.*:

> "His face is all bubuckles and welks and knobs and flames of fire."

That Dr. Pye-Smith is a classical scholar there can be no doubt, and besides the many apt quotations at the heads of chapters, there are occasional instructive footnotes of great value. One of these may here be reproduced—"*Πλευρῖτις* sc. *νόσος*, *i.e.*, the 'side-complaint,' the stitch in the ribs. The adjectival termination, *ιτις*, has been taken from this word and from *φρενῖτις* to denote inflammation, and has thus been used to form peritonitis, nephritis, orchitis, and so on." This is quite correct, for *φρενῖτις* (*gen.* *φρενίτιδος*) is properly a feminine adjective. Thus, in Plutarch, we find the full expression; ἡ *φρενῖτις νόσος*, *a disease of the mind.*

It would be idle to attempt to analyse in detail the contents of this great work, which runs to considerably more than 2,000 pages. We can but reiterate the opinion expressed in our notice of the first edition, that the work is an English classic, which will establish the reputation for all time of Dr. Hilton-Fagge as a physician, an original thinker, and a close and accurate observer. That the intrinsic merit of his text-book has not suffered at the hands of Dr. Pye-Smith will be manifest from the reference in this review to the changes he has made in the present edition.

Atlas of Clinical Medicine. By BYROM BRAMWELL, M.D., F.R.C.P., Edin.; F.R.S., Edin.; Assistant Physician to the Edinburgh Royal Infirmary, &c., &c. Volume I. Part IV. Edinburgh: T. and A. Constable. 1892. Folio.

TRUE to his promise, Dr. Byrom Bramwell gave to the medical world the fourth and concluding part of the first volume of his magnificent work on the morrow of May Day, 1892. It is fully up to the high standard of excellence already attained by the author in the previous parts.

Included in the present fasciculus of the Atlas is a monograph on smallpox, which runs to 29 large folio pages, and is illustrated by temperature charts, a plate containing nine beautifully finished and coloured drawings of the eruptions of smallpox and vaccina, and three plain lithographs of smallpox eruption and its results. This monograph gives a truthful description of smallpox and its varieties, the diagnosis, prognosis, and treatment of the disease. Figure 6 in Plate XXI. purports to be a drawing of hæmorrhagic smallpox, but is really one of *variola hæmorrhagica pustulosa* of Curschmann. In this variety, the purpuric or hæmorrhagic endency does not appear until a late stage, when the pustules are already formed. In ordinary variola hæmorrhagica (the *purpura variolosa* of Curschmann) the purpuric or hæmorrhagic endency shows itself—it may be—from the outset, and may ndefinitely postpone the development of the pustular eruption.

The other principal contribution to this Part is a remarkable ase of globulinuria in a literary man, aged forty-seven, in which n enormous quantity of mixed proteids was daily passed in the urine, and crystals of globulin were deposited, usually only after tanding for several weeks, but on two occasions within twenty-our hours after the urine was passed.

Besides the foregoing monographs, this fasciculus contains notes of three new cases of Friedreich's ataxia and a descripti of a series of cases of insanity—melancholia, mania (hilariou and furious) and pantophobia—wrongly spelled *panaphobia* b Sir Alexander Morison in his collection of Portraits of the Insane—the term meaning delusive fear of every object and person.

There is a copious index, also a title page, table of contents and list of illustrations.

We have much pleasure in congratulating Dr. Byrom Bramw on the successful completion of the first volume of this import work, the second volume of which is promised to be issued i three instead of four fasciculi—to be published on September 1 1892, January 1, 1893, and May 1, 1893.

Lectures on Diseases of the Digestive Organs. Vol. I. *Lectu on Digestion.* By Dr. C. A. EWALD, Professor in the Universit and Physician to the Augusta Hospital, Berlin. Translat from the latest German Edition, by ROBERT SAUNDBY, M.D F.R.C.P. London: The New Sydenham Society. 1891. P 214.

THIS volume contains twelve very complete and learned lectur on the physiology of digestion. The subject is treated in its branches, and the latest views are mentioned.

We have studied this book very carefully, but regret to h to say that we are much disappointed with it. We found it arranged, and exceedingly heavy reading. It is a very lear work; but it reminds us somewhat of a tangled forest, thro which the traveller is at great pains to find his way.

In justice, however, to Professor Ewald, we must say that t obscurity is by no means altogether due to him. The book h been very badly translated. Dr. Saundby seems in many pla to have taken as his model of style those keys to the classic which the English equivalent of the original language is prin word for word. This idea has led him to give us some phra which we can hardly call English at all. Thus, on page 5 read:—"We have not now to examine closely the fate of nu ment which has passed into the juices and tissues of the b *and the nearly related but not now in question subject* tissue change, in which assuredly the inorganic matter pla very important part; but we must learn the necessary pre nary steps, *that is*, the proceedings by which the orga converts various food stuffs into absorbable material." [The italics are ours.] This is a beautiful sentence; we have met with others in the work which are almost as attractive.

We wonder what is the meaning of the following description of the salivary glands:—"The blood-vessels ramify in a delicate network over the acini, and are separated by the alveolar wall from the lymph spaces, which are more or less full, according to the physiological condition of the gland, and the capillaries are thereby separated more or less from the wall of the acinus." To our ignorance it seems to say that the alveolar wall separates the blood-vessels from the lymph spaces, and the lymph spaces separate the capillaries from the wall of the acinus. Now, an acinus and an alveolus mean the same thing, and the description seems obscure.

We do not know whether we have to thank Prof. Ewald or Dr. Saundby for the eminently incorrect chemical notation and nomenclature. Hydrocyanic acid is represented by CONH. We read of amidocapronic acid; on page 76 we find the hitherto undescribed salt, Ca_3PO_4; and on p. 85 we find a hot saturated carbonate of baryta solution.

When a second edition comes to be published, we hope the translation may be re-written from beginning to end.

The Action of Water on Lead: being an Inquiry into the Cause and Mode of the Action and its Prevention. By JOHN HENRY GARRETT, M.D.; Diplomate in Public Health, Durham and Cambridge, &c. London: H. K. Lewis. 1891. Pp. 116.

THIS little book contains an account of the very careful experiments made by Dr. Garrett in order to elucidate the action of arious kinds of water on lead—a subject which is by no means clearly understood. The experiments are described in detail, so that any chemist who is interested in the subject will be in a position to repeat them.

With regard to the prevention of the solution of lead in water, the author believes that the best method consists in the addition of some alkaline carbonate to the water, and suggests the use for this purpose of carbonate of lime, as he finds that a solution of this salt containing two grains in the gallon has no action on lead. The book is well worthy of the study of all interested in the subject.

PART III.

SPECIAL REPORTS.

REPORT ON THE PROGRESS OF SURGERY.

By R. Glasgow Patteson, M.B., Univ. Dubl.; Fellow an
Member of the Court of Examiners, R.C.S.I.; Surgeon to S
Vincent's Hospital.

(*Continued from page 416*).

IV.—LIGATURE AND EXCISION OF INTERNAL JUGULAR VEI

This operation, first practised by Mr. Arbuthnot Lane, though previously recommended by Mr. Victor Horsley in cases of pyæm due to septic thrombosis of the lateral sinus secondary to chroni disease of the middle ear or mastoid antrum, has now become s firmly established as a recognised surgical procedure that nothing need be said as to the grounds for its performance or the cases in which it is indicated. It is sufficient to say that in every case o chronic otitis media in which symptoms of pyæmia develop, as shown by repeated rigors and rises of temperature, to 105° or 10 F., combined with swelling and tenderness down along the anteri border of the sterno-mastoid muscle, the lateral sinus shoul without hesitation, be explored, and the jugular vein ligatured a excised if necessary. Mr. Rushton Parker, in the *Liverp Medico-Chirurgical Journal*, No. 22, Jan., 1892, has recorded tw cases, one of which we quote at some length on account of th points of interest involved. The patient was twenty-five years o age. When a lad of fourteen he got kicked on the left side of th head, and had a bleeding from the ear, which gave rise to n permanent damage except a tendency to a slight discharge o catching cold. The present attack came on suddenly. There w "almost entire deafness of the left ear, from which fœtid pus w issuing." There was no swelling or tenderness over the mast region, but there were "swelling and tenderness of the neck j below." Double optic neuritis, more marked on the right than o the left side, was present. Rigors were frequent; evening te rature, 105°; in the morning, 102° F. His condition getting rse, it was decided to explore the jugular vein. "The vein was und firmly plugged from the base of the skull to below the nction with the facial trunk. Both veins were cut between two atures in their healthy parts, and their plugged portion detached m its bed, with a crop of swollen lymph glands covering the per part of the jugular. The mastoid region was opened with a uge and mallet behind the ear, emitting an excessively fœtid our, and revealing the interior of the lateral sinus occupied by en purulent lymph, and the tail end of a purple blood clot, kening downwards. The detached jugular was opened, and und to be lined with gray membranous lymph, surrounding a n plug of purple blood clot, partly softened and puriform within. is portion, about two inches or more in length, was cut away, ving below the skull about an inch, the lymphy lining of which scraped away, after which the passage upwards to the lateral nus was well irrigated with perchloride of mercury solution. sinus was partly scraped, and in probing upwards blood flowed ly, but was quickly stopped with a plug of antiseptic wax."[2] days later the temperature rose again, the patient was put der chloroform and the wound opened up. The plug of wax removed. "Behind the wax plug fœtid pus had collected; and n the antrum a small quantity of cheesy material was removed, small mastoid cells opened, and the way made free for washing roughout this dangerous annex to the middle ear." The patient de an uninterrupted recovery after this second operation. In second case the patient—a boy aged seven—died three days r the operation, "with symptoms suggestive of meningitis." account is given of a *post-mortem* examination.

The success of Mr. Parker's first case, in spite of great surgical ngers and the late period of the illness when the patient applied treatment—after symptoms of pyæmia were fully developed— ght to convince the most sceptical of the splendid addition this cedure has made to surgical therapeusis, and to warn the timid vacillating that on their heads will lie the death of those cases hich are not sufficiently early entrusted to operation. Mr. Parker roduces a useful diagram of Mr. Ballance's, showing the different

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[1] A better method of stopping the flow of blood from any of the cranial sinuses is the simple invagination of the torn walls with gentle pressure, or if that is not ble, by the introduction of a few coiled strands of fine carbolised ligature gut.

[2] The formula of this antiseptic wax, *vide supra*.

openings required for the various procedures and their relations; and most surgeons will, we think, agree with the preference which he expresses for the gouge over the obsolete trephine in dealing with the lateral sinus and its neighbourhood.

V.—ENUCLEATION IN THE TREATMENT OF GOÎTRE.

In the *Revue de Chirurgie*, Sept., 1891, Tom. XI., No. 9, M. Hache details a case in which he removed from the neck of a child, aged 13, a tumour as large as a goose egg, which, with the exception of a small cyst ruptured in extraction, was of a solid homogeneous character, presenting the features of a parenchymatous goître. The child made a rapid recovery, and six months later no enlargement of the thyroid could be felt. As regards the steps of the operation, a median vertical incision was made, and then passing down in the gap between the sterno-thyroid muscles the enlarged thyroid body was met with, at once presenting its normal colour and consistence. It was cautiously incised, and just below the surface from which it was separated by a thin layer of gland tissue lay the new growth. Enucleation and the remaining steps of the operation were mostly done with the fingers. The bleeding was slight, three pressure forceps being sufficient to check it, and no ligatures being required. In conclusion, M. Hache puts enucleation in the front rank of treatment—"Its efficacy, its extreme simplicity, and the entire absence of any anxiety as to the occurrence of cachexia strumipriva lead one to employ it without hesitation in place trying interstitial injections of tincture of iodine—a method tha often uncertain [and we might add, generally *useless*], is alway slow in dealing with tumours of such a size." It is a matter congratulation that a method of treatment has been found whi offers hopes of relieving sufferers from this condition witho endangering their health, for it is now firmly established th extirpation has this unhappy sequel. The supervention of a co dition allied to myxœdema is so real and so deterrent a danger total removal of the thyroid body that we consider this operati justifiable in none but the extremest cases, where the mechanic effects of the growth are a constant and an uncontrollable mena to life.

In the same journal, *Revue de Chirurgie*, No. 3, Mars, 189 Prof. A. Reverdin, of Geneva, publishes a paper on this subje He gives in tabular form the results of 14 cases in which he operated, with 1 fatal issue. Of these, 9 occurred in women.

0, the tumour was on the right side; in 2, median; and in 2 on
e left side. In 5 cases the enlargement was of a parenchyma-
ous nature; in 6, cystic; and in 3, adenomatous. In 7 cases
rtial extirpation was practised; in 7, enucleation. The one
ath occurred in the former category, and in it collapse of the
achea from pressure-absorption rendered tracheotomy necessary
few hours after the operation, and four days later the patient
nk from pulmonary congestion. M. Reverdin is by no means
advocate for wholesale operative measures. He has obtained
od results from the employment of iodoform internally—one
ain three times daily in a pill. The formula he employs is:—

℞. Iodoforme - - 2 grammes.
Extrait d'absinthe Q. S. pour 30 pilules.
D. S. - - 3 pilules par jour.

his acts beneficially not only on those enlargements which occa-
nally follow uterine troubles or childbirth, but in cases where
e gland is really degenerated, in true cases of goître. In all
ses it appears to exert a direct influence on the healthy tissue
the gland—causing a diminution in size—rather than on the
w growth itself. Though this at first sight seems rather an
desirable than a beneficial action, still no evil results have
parently followed. The indications for operative interference
thus stated by the author:—"*When iodoform, or any other*
atment considered efficacious, has been fully tried, and there is,
withstanding, an increase in the symptoms; gradual but continual
argement of the gland, persistence or aggravation of the pain, and
erference with the respiration; then operative intervention is
icated." To the question, "What form is this operative inter-
tion to take?" Prof. Reverdin gives an unhesitating reply—
all cases where it is possible, *enucleation*; and "we must insist
the fact that the further we progress the more clearly we see
t enucleation is the true method, and that its application is
ch easier than was at first sight apparent." The thyroid
ue must be carefully laid bare, gradually and slowly incised
er by layer, and at a variable depth from the surface, according
he author, the tumour proper will be exposed to view. "*So*
as you are doubtful you are not on the growth," which will be
nediately recognised by its brownish-gray colour and its
oother surface. The incision must then be enlarged, and now,
h the aid preferably of the finger, the tumour is rapidly enu-
ted out of the bed of the thyroid tissue in which it is lying,

and to the walls of which it is at times adherent. Rapidity is here the order of the day, for it is now the hæmorrhage, often alarming, begins, and till the growth is removed it cannot be mastered. Fatal results from this method M. Reverdin has not yet met with, and he strongly urges two other points in its favour—rapidity of performance and rapidity of healing. In his 7 cases of partial extirpation the average duration of the operation was 62 minutes, and of the healing 14 days; while in an equal number of enucleations the respective durations were—26 minutes, and less than 7 days. In conclusion, two axioms are formulated—1. The surgeon ought above all things to endeavour to perform enucleation; 2. If he succeeds he will cure his patients more surely and more rapidly, he will leave less visible traces of his handiwork, and above all he will save them from the misery of operative myxœdema.

VI.—TREATMENT OF SUPPURATIVE CHOLECYSTITIS.

In the *Berliner klin. Wochenschr.*, No. 11, 1892, H. Lindner records a case (one of four operations on the gall-bladder) which presents features of unusual surgical interest. The patient was a woman, twenty-eight years of age, who some time previously had suffered from perityphlitis, which had yielded to treatment. She now had a train of symptoms which pointed to suppuration of the gall-bladder. Accordingly an incision was made along the outer edge of the right rectus muscle, and the gall-bladder exposed. It was found enormously distended, and on incising it a large quantity of pus and a fair-sized calculus escaped. It was fixed to the abdominal wall, thoroughly washed out and drained. In a few days the discharge of pus gave place to a discharge of bile, and the patient made a speedy recovery, leaving the hospital at the end of five weeks. She still had a biliary fistula. Three months later she returned with the colic and other symptoms as bad as before. The fistula still discharged bile. On enlarging the opening the finger passed into a canal which extended upwards and backwards in the direction of the liver and ended in a *cul-de-sac*. Here a calculus was felt, separated from the canal by a membrane, which was apparently the thickened wall of the bladder. The liver and gall-bladder were exposed by an abdominal incision, and it was then found that the latter was divided into two compartments by a band of cicatrical tissue, and that the return of the trouble was caused by the impaction of the calculus in the opening of communication between the two compartments. The stone was removed with great difficulty, but the patient made an excellent recovery with subsequent closure of the biliary fistula. The case illustrates the difficulties that beset diagnosis, and the care that should be exercised in exploring the bladder at the time of operation.

VII.—SURGICAL TREATMENT OF HEPATIC ABSCESS.

At the meeting of the Paris Société de Chirurgie, 13th Jan., 1892, M. Fontan brought forward two cases of abscess of the liver which he had treated by free incision and curetting, basing his mode of treatment on the grounds that incision and irrigation were insufficient to remove the shreds of gangrenous tissue which were often left adherent to the walls of the abscess cavity, and which, by keeping up prolonged suppuration, wore out the patient's strength before they became cast off. The scraping was gently done with a blunt curette, the left index finger acting as a guide, and was accompanied by only slight bleeding. In the discussion which followed, M. Pozzi remarked that he had seen this method practised in Egypt and Athens, and that it possessed the advantage of exposing, and causing the evacuation of, a second abscess which might have been overlooked. At the same time he did not consider this advantage to outweigh the risks of the procedure—hæmorrhage and the opening of the biliary ducts. M. Monod condemned the practice as not only dangerous but useless, and quoted cases in support of his views.

The second case is of much interest as bearing on the diagnosis of multiple abscesses, that bane of operating surgeons. A patient just returned from Cochin China presented all the symptoms of abscess of the liver. Three exploratory punctures gave no result; a final one, however, in the sixth costal interspace showed pus. A large incision was made, the rib resected, and free drainage provided. Marked improvement followed, but was of short duration. The temperature again became high, the diarrhœa became profuse, the cachexia became more marked, and six weeks after the operation the patient died. At the autopsy it was found that the abscess which had been incised and drained had completely collapsed, but that two others—one on the upper surface of the liver, and one on the lower—had escaped the knife. Hence the fatal result.

In this connection we may refer to a case published by Mr. F.

T. Heuston in the *British Medical Journal*, April 2nd, 1892, and brought by him before the Dublin Biological Club. The patient, twenty-seven years of age, had served as a clerk to the Imperial British East African Company for some months near Zanzibar. He was attacked by remittent fever, and invalided to Aden. After recruiting there he returned to Mombaza, only to again fall a prey to fever, and he was shortly afterwards invalided home. This was in September, 1890. He obtained employment at home, and for about a year was able to perform his duties, when he had to resign. In December, 1891, he came under observation. "His liver was greatly enlarged, giving rise to bulging out of the ribs and fulness in the epigastrium. He complained of dull aching pain in the hepatic and right iliac regions, also of tenderness below the costal arch, chiefly in the epigastric region." An operation was performed, and twenty ounces of pus first removed by the aspirator, followed by incision and the withdrawal of about three pints more. Rapid improvement followed, and the sac of the abscess seemed closing when a recurrence of the symptoms took place, and a swelling was detected to the left of the median line in the epigastrium. A further incision was made, the liver found adherent to the parietes, and an abscess containing a pint of pus opened. Improvement again followed the operation, but subsequently the patient's strength failed, and he died eight days after the operation. The autopsy showed marked contraction of the cavities which had been drained—in fact, they were fas approaching obliteration—but posteriorly in each lobe a larg abscess was found "entirely out of reach of operative interference."

The question raised by these cases in which the liver is riddle with multiple abscesses is one of the gravest that can be plac before the surgeon for solution. One important fact seems to b now established by a sufficient number of observations, and th is, that a renewed aggravation of symptoms after the evacuati of a hepatic abscess points to increased activity in another focu of suppuration, probably roused into increased action by th reduction of general tension following the operation, and requiring immediate and further operative interference. Judged in th light of these and similar cases, it would appear as if M. Fontan' proposition of curetting the interior of liver abscesses might b valuable aid to the diagnosis of multiple abscesses, and we thin if such a measure were gently done with the flushing goug introduced by Mr. Barker for the treatment of psoas abscess, used with a continuous stream of hot water, that the risk of hæmorrhage at all likely to prove fatal would be reduced to zero. Further, now that experience has taught us that the failures in the majority of these cases are due to undetected abscesses, we fail to see why the methods adopted in dealing with other organs should not be adopted here. Is the liver more sacred than the kidney or the brain? Yet we probe these organs with trocar and grooved needle without ill result: why not the liver? Is the liver the last place of the "microcosm of man" of which we must speak with bated breath, owning that within it dwells a veritable fetish, and that it alone remains holy ground?

VIII.—INTERMITTENT HYDRONEPHROSIS.

Messieurs Terrier and Baudouin have published in successive numbers of the *Revue de Chirurgie* (September, October, and December, 1891) a series of articles on this interesting pathological condition and its surgical treatment, which, taken together, onstitute a complete monograph on a subject hitherto but slightly ouched on in any of the larger and recognised authorities. A careful analysis in tabular form of 83 cases—all as yet recorded—orms the basis of their communication. As the result of these tudies the authors have arrived at certain very definite concluions, some of which we here quote as they are of interest as well s of practical bearing. This form of hydronephrosis—intermitent—only recognised in recent years, is much more common than generally supposed, and is often the earlier stage of a permanent ondition. This clinical variety may be produced by many arious conditions: in by far the largest number it is a complicaon of *renal displacement*. It is found more frequently in women, nd has a predilection for the right side in the female and for the ft in the male. It is sometimes due to a calculus impacted in he pelvis of the ureter, or may be the result of compression or temporary obliteration of the lower portion of the ureter. In few cases it is congenital. The method of its production in ses of floating kidney has been studied in experiments and in he facts of morbid anatomy. When displacement of the kidney curs, a kinking of the ureter, with or without torsion, follows, companied by a temporary arrest of the evacuation of the urine d gradual formation of a hydronephrotic pouch, which empties self when the kidney returns to its normal position. This interference with the circulation leads to inflammatory changes in the neighbourhood of the pelvis or in the mucous membrane of the pelvis itself, as a result of which fibrous bands of adhesions may form between the sac and the upper part of the ureter, and may end by converting an intermittent into a permanent hydronephrosis. These alternating periods of fulness and emptiness of the pelvis, consequent upon the transitory obliteration of the ureter, manifest themselves clinically by *paroxysms of pain*, which occurring generally every month, and sometimes oftener, and following on a period of health more or less perfect, are almost characteristic of the affection. These paroxysms present three phases—onset, climax, and terminal phase—which are characterised by pain, always severe and sometimes almost intolerable, and by the coincident appearance of a tumour—fluid but rarely giving rise to fluctuation—which is generally seated in the right loin, and is synchronous with a marked diminution in the quantity of urine passed. These are the results of the sudden kinking of the ureter which follows the displacement of a floating kidney. Each attack lasts for some hours, coming to a sudden termination when the kidney regains its normal position. The pain and swelling disappear, and there is a copious evacuation of urine, consequent on the emptying of the pelvis. Those cases which have been hitherto described as instances of *acute strangulation of floating kidneys* are in reality only an early stage of the condition of intermittent hydronephrosis.

In many of these cases the question of treatment does not arise. The attack lasts a day or two, and with the evacuation of the pelvic accumulation of urine all trouble ceases, and months of absolute comfort may succeed. But where the pain is excessive in degree, and the periods of intermission short, so that the patient is being rapidly worn out by the constant strain and loss of repose, then the question of operative treatment becomes of paramount importance. Moreover, the danger of a septic infection of the retained fluid, with the consequences of an infective pyelonephritis, must always be present in the mind of the surgeon, and adds enormously to the gravity of the case. Hence, in early stages *nephropexy*—or the fixation of the kidney to the abdominal wall—offers the best chance of success. But when the tumour is large and increasing in size more radical measures are needed, and especially if both kidneys are affected, the most promising measure is incision and drainage of the pelvis on the side which is most engaged, with the view of establishing a *pelvic fistula.* But in other cases, when one kidney still remains sound, it is better to have immediate recourse to *nephrectomy.* It entails less suffering on the patient, and holds out better hopes of success, than the establishing of a urinary fistula, as many of these cases have required the subsequent performance of a secondary nephrectomy under conditions much less favourable for the surgeon and for the patient.

As regards the operation of *nephropexy*—the name preferred by the authors instead of *nephrorraphy*, that given to it by its originator, Hahn—the kidney is exposed by a lumbar incision in the usual way, and fixed from above downwards by sutures of silk, which penetrate into the kidney-substance as well as the capsule, and are then passed through the aponeurosis of the quadratus lumborum. Mr. Morris, we may here remark, uses kangaroo tendon, and Mr. Treves silkworm-gut sutures, as Dr. Newman found the absorption of catgut to be more rapid in the kidney than in any of the other tissues. The authors entirely condemn the palliative treatment by suspensory bandages and trusses, not only as being useless, even when well applied, which is seldom, but also as allowing the condition to progressively develop, thus adding to the difficulties of future surgical interference. Aspiration of the tumour or the establishment of a lumbar urinary fistula are equally condemned; but a urinary fistula may be, in certain cases, established by lateral laparotomy, incision of the pelvis, and stitching of its walls to the abdominal opening after the manner of dealing with hydatid cysts. This incision allows the extirpation of the kidney at the same time if found necessary.

IX.—SPINAL SURGERY.

The attention of surgeons has recently been drawn largely in this direction, and the brilliant results which have, in a few cases, been already attained seem to hold out the hope that, with larger experience and improved methods, the spinal canal and its contents will come within the legitimate range of practical surgery. In an important paper in the *Revue de Chirurgie*, T. XI., No. 7, 1891, M. Chipault deals with some new facts in connection with the surgery of Pott's caries, his first case being an example of a further adaptation of Mr. Treves' operation for lumbar abscess by direct incision and drainage. In this case—a boy aged nine years—no abscess could be detected, but there was severe sciatic pain in the left side, considerable lordosis from contracture of the sacro-lumbar muscles, pain on pressing over the left transverse processes of the three lower lumbar vertebræ, and also marked tenderness on palpation of their bodies through the flaccid and emaciated abdominal wall. The diagnosis was tubercular caries of the bodies of the vertebræ with extension on the left side compressing the roots of the sciatic nerve. At the operation large fungous masses of tubercular tissue were found extending from the diseased bodies and compressing the nerves at the foramina of exit. These and the softened parts of the bodies were curetted away carefully, and in the anterior part of the cavity thus left the aorta could be felt distinctly pulsating. The operation was almost bloodless. A drain was passed across the vertebral cavity, coming out at the most dependent part of the wound. It was removed at the first dressing, and the wound was found completely healed at the second (the dates are not given). On the 15th day the pain and lumbar contracture had completely disappeared. In this case, to which we have referred at some length on account of its intrinsic interest, the spinal canal was not opened, but in the following cases M. Chipault has deliberately adopted a method for the treatment of ante-medullary lesions by trephining and drainage through the vertebral canal. In his three cases the patients were the victims of Pott's disease, and were paraplegic. The first, a boy, aged nine, who had suffered for some months from caries of the upper dorsal spine, suddenly became paralysed after falling down a staircase. He was treated by suspension and jackets, but without benefit. There was incontinence of urine but not of fæces; there was no cystitis. After a short interval the following operation was performed. An incision 10 c.m. long was made over the transverse processes of the 2nd, 3rd, 4th, 5th and 6th dorsal vertebræ, the periosteum was reflected outwards and the arches resected. The dura mater was found healthy, but at the 4th vertebra there was found a projection and a compression so marked that the spinal cord seemed to be altogether wanting. Numerous fungous projections into the canal were scraped away, a large abscess was opened, and the ridge of bone projecting was completely removed, and the cavities of the diseased vertebræ as far as possible cleaned out. The destruction of the bodies was enormous, and the removal of the disease certainly incomplete. Notwithstanding this the wound healed, and the progress was excellent for some time, but a month after the operation the child succumbed to an attack of broncho-pneumonia. At the autopsy the wound was found firmly closed by a mass of osteo-fibrous tissue, evidently developed from the periosteum that had been preserved; but a large cold abscess in connection with other diseased vertebræ was found. In the second case, a girl aged four and a half years, the same region of the spine was affected, but not so extensively. The paraplegia was one produced by a gradually increasing pressure, and not one suddenly developed by fracture or displacement. A similar but less extensive operation was performed. Numerous outlying fungosities were scraped away, and the principal focus of infection in the posterior part of the body of the 4th dorsal vertebra was thoroughly evacuated and cleansed. A drain was inserted into it and brought out across the vertebral canal between the 4th and 5th dorsal nerves; the muscles cut were sutured, then the skin, and the whole wound irrigated until the boric solution returned clear. An immobile dressing was applied. An excellent recovery followed. On the second day motion returned in the toes, and on the fifth day she could lift the heel from the bed. In the third case, a child whose age is not given, a similar procedure gave similarly good results. In six hours after the operation the child lifted its two heels together off the bed to any height, and the paralytic club-feet had disappeared; and the following day the exaggeration of the knee reflexes was gone. So far it has continued to progress favourably.

Striking as these cases undoubtedly are, though too little time has been allowed to elapse after the operations to formulate any decisive judgment on the permanency of their results, still M. Chipault must be congratulated on the skill and courage with which he has tackled a class of hopeless cases, and one too often allowed, hitherto, to glide unheeded from suffering to suffering till death brings a happy release. The conclusions which the author formulates from his experience are as follows:—

1. The operation is anatomically possible; it requires skill, but it is easy to avoid injury of the meninges or of the spinal nerve roots. Drainage and irrigation of the diseased centres through the vertebral canal do not give rise to even transitory disturbances of the medulla.
2. By direct treatment of the tubercular focus we may hope to obtain a result not merely palliative but curative—a result impossible with the methods hitherto employed.

X.—SPASMODIC TORTICOLLIS.

Dr. Charles A. Powers has recorded (*New York Medical Journal*, March 5, 1892), a case in which he performed the operation recommended by Keen in cases of obstinate spasmodic wryneck, in which excision of portion of the spinal accessory nerve has failed to give relief—viz., resection of the posterior branches of the first three cervical nerves. This procedure was independently practised and advised by Mr. Noble Smith, and his case, in these countries, together with those of Dr. Keen and the author in America, constitute, according to Dr. Powers, the only three cases as yet recorded. Keen's patient was a woman, fifty-four years of age, who had suffered for some years from spasmodic movements of the head towards the left shoulder. In 1886, when the affection had persisted for over two years, Dr. Ashurst excised four inches (!) of the spinal accessory nerve; the spasms disappeared for a week and then returned as before. Some time after this the patient came into Keen's hands, and excision of portions of the nerves supplying the posterior rotators was practised, with the result that though a slight amount of spasm returned the patient was much benefited by the operation. In Noble Smith's case, a lady, aged forty-one, had suffered for sixteen years from severe spasmodic wryneck, the result of a strain of the neck. Stretching, and subsequently resection, of the spinal accessory nerve were performed; but, the spasms continuing, a month later, in May, 1890, parts of the posterior divisions of the upper cervical nerves, as low down as the fourth, were excised. Recovery from the operation was complete, the spasms ceased, and eleven months afterwards there had been no recurrence.[*] Dr. Powers' patient was a man of muscular build, thirty-seven years of age, in whom the spasms began two and a-half years previously, and had been increasing in severity ever since. Only the posterior rotators appeared to be affected; "the spasmodic movement seemed to be a rotation of the atlas upon the axis;" the trapezius and sterno-mastoid were apparently not implicated. Excision of parts of the posterior divisions of the upper three cervical nerves was performed, with the result that the patient is now free from pain, which before was intense; "the deformity is but slight, and movements of the head are quite free, there has been no return.

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[*] For a fuller account of this case, and description of the steps of the operation, see "Spasmodic Wryneck and other Spasmodic Movements of the Head, Face, and Neck." By Noble Smith, F.R.C.S., Ed. London: Smith, Elder, & Co., 1891.

of the spasms, and he is able to attend to his daily work which was impossible before the operation." The author discusses the various steps of the operation, the relative value of the transverse incision adopted by Keen and followed by him, and the vertical incision of Smith, and attributes the better result obtained in Smith's case to the inclusion of the fourth nerve in the resection. This he regards as an advisable step in future operations. From his study of the subject he concludes: "That in spasmodic affection of the muscles supplied by the posterior branches of the upper cervical nerves resection of those nerves is a procedure, practically devoid of danger, which offers many chances for marked amelioration and a fair prospect of permanent cure."

XI.—TENOTOMY BY A NEW METHOD.

Dr. W. W. Keen, rightly regarding the older method of subcutaneous operation as a relic of pre-antiseptic days, has devised a new method of open operation, which he practised successfully in a case of contracture of the flexors of the fingers following hemiplegia. Subcutaneous section was always more or less of a haphazard operation, and the length to be added to the shortened tendon could never be accurately measured, Now the necessity for operating in the dark and avoiding the entrance of air into the wound are things of the past, and the surgeon can accurately measure the required length he wishes to add to the shortened tendon. A free incision is made; the contracted tendon is fully exposed, and is then divided along its middle for a little more than half the distance it is intended to lengthen it. The halves of the split tendon are now divided above and below on opposite sides—*e.g.*, in the forearm. If the ulnar side of the split tendon is cut above, the radial side must be cut below. In this way the two halves are allowed to glide the one over the other for the required distance and are then united by transverse sutures. The simplicity and wide applicability of this operation will at once recommend it to surgeons, and another of the once useful subcutaneous methods of operation will go the way of so many other short-lived surgical triumphs.

XII.—TUBERCULOSIS OF THE URINARY BLADDER.

In an article on the "Electric Illumination of the Bladder" (*Medical Annual*, 1892, p. 118) Mr. Henry Fenwick sums up the results obtained up to the present by the use of the cystoscope.

Among the subjects referred to in this most interesting review, which is illustrated by some excellent chromographs, is that of tuberculosis, and though admitting that "there is no disease of the urinary organs capable of such accurate mimicry as tuberculosis," and that "there is hardly a common disease of the tract that it does not simulate at one time or other of its progress;" yet Mr. Fenwick believes that the diagnosis may be accurately made, most stress being laid on the family history and the presence of the bacillus tuberculosis. In a case here illustrated by a figure "the symptoms were only of a few weeks' duration, and were very characteristic of *stone* in the bladder." Electric endoscopy showed ulceration. "The ulcers were small, punched out, and had vivid red margins; they were situated on a dull red base of infiltrated mucous membrane. The patient rapidly became phthisical." We cannot, however, agree with the distinction Mr. Fenwick apparently draws between "tubercular" and "scrofulous" ulcers (p. 123). *Post-mortem* evidence shows the identity of the processes in the bladder as elsewhere. For what he calls "catarrhal and scrofulotic ulcers" the author recommends injections of lactic acid, one-half to three per cent., given daily, and scraping; but no description of the latter procedure, nor reference to cases, is given, important as it undoubtedly is to bring within the range of surgical progress an affection so intrinsically painful and so liable if left to itself to lead to a lethal issue. Hence we hail with pleasure a paper bearing on this subject by Dr. Lewis S. Pilcher, of Brooklyn, entitled "Notes on Tuberculosis of the Urinary Bladder, and the value of Suprapubic Cystotomy in its Treatment" (*New York Medical Journal*, March 5, 1892). Dr. Pilcher gives notes of five cases, in four of which this operation was performed. From an analysis of the cases we gather that the leading symptoms of tubercular ulceration in the bladder are—frequency of micturition, generally associated with pain and straining; hæmaturia, in all cases except one, in which there was an ischio-rectal abscess and the urine was full of pus; general irritability of the bladder; and frequently the passage of shreds of tissue in the urine. In all cases epithelial *débris* and pus cells occur in large quantity. As regards the diagnosis of primary disease, stress is laid on the observations of Rosving, who found tubercle bacilli in the urine in three out of thirty cases of cystitis examined by him, and the first place among diagnostic tests is, of course, given to the discovery of the bacillus. Of the cystoscope Dr. Pilcher, rather unfairly we think, speaks in a very slighting way. "If, by rare chance, when it is introduced, the fluid contents of the bladder are clear enough to enable its mirror to reflect any portion of the bladder wall," yet it can reveal but imperfectly and uncertainly the degenerative and inflammatory changes that may be present; while direct ocular inspection and palpation through a dilated suprapubic opening still need the confirmation of the bacteriologist in order to establish beyond question the opinions they may have suggested." What "ocular inspection" revealed in one case is thus described:—"An area of mucous membrane as large as a silver dollar, intensely congested, velvety in appearance, raised somewhat above the surface of the surrounding normal mucous membrane, as if by infiltration of the submucous tissue, and bleeding freely when touched." This is the "*tubercular ulcer*," and may be contrasted in its features with that described by Mr. Fenwick above, not as being contradictory, but as illustrating most probably two phases of the one condition—the "punched out" ulcer of the latter being a later stage of the infiltrated patch "somewhat raised above the surrounding mucous membrane" to which Dr. Pilcher refers.

In the treatment of these, unless in an early stage, scraping can avail but little, as the infiltration in many cases rapidly becomes so deep that no instrument dare follow; and Dr. Pilcher questions "whether in any of these cases very substantial advantage is to be hoped for by attempts at special topical antitubercular treatment." "The most that can be hoped for from treatment is to prevent the collection of urine in the bladder, to keep the bladder at rest, and to mollify the effects of the existing nfection by relieving pain, removing *débris* and irritating ecretions, preventing muscular spasm, and restraining inflammation," and that is surely a good deal to attain in a hopeless lass of cases. So far the results obtained cannot be said to be more than promising. Of the four cases operated on very marked enefit was derived in two—one in fact practically cured—"while n the other two no benefit, but on the whole, decided disadvantage was the result." Dr. Pilcher closes his most interesting and uggestive paper by considering two questions:—"1. How early n a case of bladder tuberculosis is a suprapubic section desirable? . How long is it desirable to maintain the suprapubic opening patent?" The answer to the first depends upon the amount of cystitis, of pain, and of general distress which are present.

Nothing is gained by delay; and physiological rest should be obtained for the diseased organ before "the general health is sapped by the local suffering, the extension of the disease, and the absorption of deleterious circumstances into the circulation." The second question will be answered by the amount of recovery made, or of comfort obtained, by the patient after the operation. In all cases many months of suprapubic drainage will be required; in many others the issue of the case will save the surgeon the trouble of assigning any limit to its duration.

XIII.—TREATMENT OF TUBERCULOSIS OF BONES AND JOINTS.

In an elaborate and exhaustive paper published in the *Annals of Surgery* (Vol. XV., No. 1, January, 1892), Dr. N. Senn reviews the method of treatment of tubercular affections of bones and joints by the so-called parenchymatous and intra-articular injections, and shows such a favourable series of results that many surgeons will be inclined to give the method a full trial. The various remedies that have from time to time been suggested are passed under review, and the preference is finally given to iodoform, used as a 10 per cent. emulsion in glycerin or olive oil.[*] The ethereal solution of iodoform should never be employed as it may give rise to local troubles—necrosis, and to general toxic symptoms. Dr. Senn attributes the beneficial effects of these injections directly to their anti-bacillary qualities. The injections ought to be carried out with intervals of from one to two weeks until the indications point to a cessation of specific and a return of healthy inflammation. How this is to be ascertained is thus formulated:—"In tubercular empyæma (*sic*) of joints and tubercular abscesses gradual diminution of the contents of the joint or abscess at each successive tapping, lessening of the solid contents of the fluid, and increase of its viscidity are the conditions which indicate unerringly that the injections are proving useful, and that in all probability a cure will result from their further use." The strictest antiseptic precautions must be observed during the processes of tapping and injecting, and where a large abscess cavity has to be evacuated repeated irrigation should be employed before the injection of the emulsion. The author strongly urges the employment of "parenchymatous and intra-articular injections of safe anti-bacillary substances in all subcutaneous tubercular lesions of bones and joints accessible to this treatment." Of course amputation and resection are not to become forgotten arts in the surgery of joint tuberculosis in the future; but even when recourse to these is necessary Dr. Senn finds that "preliminary treatment by iodoform injections into the affected joint constitutes a valuable preparatory treatment to the operation, and adds to the certainty of a favourable result." Next to iodoform in efficacy the author lays stress on the balsam of Peru. A brief abstract of a case will show more clearly the method employed. It is one of the ten recorded by Dr. Senn in support of the views advanced. The subject was a boy aged seventeen. Diagnosis:—Tubercular spondylitis of upper dorsal vertebræ; formation of large lumbar abscess, probably communicating with the primary osseous lesion. The abscess was tapped in the lumbar region immediately below the last rib, and *six pints* of characteristic tubercular pus were evacuated. The cavity was washed out repeatedly with boric acid solution until the fluid returned perfectly clear. An ounce of iodoform emulsion was now injected and antiseptic dressings applied. Between June 18 and August 5, tapping, irrigation, and subsequent injection, as described above, were four times performed. At each tapping the quantity of fluid was less, so that on the last occasion not more than *four ounces* of a viscid opaque fluid were removed. Since then the case has progressed favourably; the abscess has not refilled, and the general condition of the patient has undergone marked improvement. This case is extremely hopeful; most surgeons being familiar with the dreary chronicity of psoas and lumbar abscesses, so that such a result in less than two months of treatment is one that many will be anxious to follow. In view of this we may append one of the conclusions to which Dr. Senn's experience has led him:—"In open tubercular affections of joints, incision, scraping, disinfection, iodoformization, iodoform gauze tampon, suturing, and subsequent injections of iodoform emulsion as advised by Billroth yield excellent results, and should be employed in all cases in which a more formidable operation can be avoided."

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[*] We can recommend as a still more valuable injection-material a solution of iodoform in "paroleine," an odourless and absorbent petroleum derivative recently introduced by Messrs. Burroughs, Wellcome, & Co.

Further evidence in favour of Dr. Senn's method comes to us from France, and with a weight of authority which cannot be overlooked. At the meeting of the Congress for the Study of Tuberculosis (*Revue de Chirurgie*, No. 9, 1891), M. Verneuil brought forward nine cases illustrative of the results obtained in surgical tuberculosis by subcutaneous injection of *iodoformed ether*. In two cases of Pott's disease—one an enormous iliac abscess, the other a psoas abscess pointing in the thigh—rapid cure had followed the evacuation of the pus and the introduction of the iodoform, although in the former case some drops of ether had escaped into the abdominal cavity and caused peritonitis in a slight degree; and the cure had now persisted for some years. In two cases of hip-disease which required resection and subsequent scraping of numerous fistulæ which recurred, injection of iodoform caused a rapid cure. In a case of white swelling of the knee in which, on account of the rapidity of its progress, excision of the joint was considered advisable, rest and iodoform injections caused rapid closing of the sinuses and such amelioration of the symptoms that the patient, a lad of sixteen, can now walk about in a fixed apparatus, the local and general condition being perfect. Other cases in which good results followed were—tubercular ulceration of the tongue, white swelling of foot, and an empeyma in which a fistula persisted after the resection of portions of several ribs. M. Verneuil insisted on the necessity for the continuance of the iodoform treatment for some time after apparent cure in doses of 5 to 10 centigrammes, and drew attention to the point in using an ethereal solution that the canula should be retained in place for some little time to allow the escape of the vaporised ether and prevent undue distension of the sac. At the same meeting M. Redard drew attention to the good results he had obtained by the injection of iodoformed oil—10 parts in 100—which he prefers to ether. Out of 30 cases—26, tuberculosis of the bones—25 cures were noted.

These striking results in America and on the Continent ought to draw more closely the attention of surgeons at home to this method of treatment, which appears, at any rate, free from all risk.

XIV.—GASTROSTOMY.

In an admirable paper read before the Chicago Medical Society, and published in the *Medical Recorder*, January, 1892, Dr. Senn reviews the present position of this operation, basing his remarks on three cases of his own. As the result of an analysis of all the cases recorded (the operation only dates from 1849; Sédillot's case and many of the earlier cases belong to the pre-antiseptic era), the mortality from the operation is only about 25 per cent.—certainly a good record for such a grave procedure; one, moreover, that is generally, and wrongly, only resorted to when the patient's powers have sunk below rallying point. Now that the question of the relation of physician and operating surgeon in cases of this class is being so earnestly debated, perhaps we may be allowed here to emphasise the remarks with which Dr. Senn directs attention to the necessity of early intervention if a prolongation of life is to be hoped for. "The bad showing of the operation should only remind us not to postpone it until the patient has not sufficient recuperative powers left to rally from its immediate effects, and to secure a satisfactory repair at the site of operation. . . . The operation should never be delayed until the patient is on the verge of starvation." The various methods of performing the operation are discussed, and Fenger's incision is rightly, we believe, discarded, the incision at his site causing too great a drag on newly-formed adhesions, and accounting for many of the failures by rupture of the union after withdrawal of the mechanical supports employed. "The upper central part of the left rectus and the eighth intercostal space between the cartilages of the ribs are the most desirable points for the formation of the gastric fistula." The former is the incision advised by Von Hacker and practised by him in fifteen cases, fourteen of which were successful so far as the operation was concerned. The latter is the ingenious suggestion of Hahn (vide *Berl. med. Wochenschr.*, No. 14. 1890), successfully adopted on eight occasions. In discussing the question of difficulty in finding the stomach, owing to the atrophy and diminution in volume of the organ which are so often present in cases of œsophageal obstruction, Dr. Senn refers to the mistakes that have been made, such as opening the duodenum and transverse colon, and recommends the distension of the stomach by gas after his method of intestinal inflation now so widely practised. But here he seems to forget the usual impermeability of the stricture, whether cicatricial or neoplastic, at the period when operative measures are resorted to, and the difficulty, not to say danger, of stopping in the middle of an operation of such serious nature to attempt catheterisation of the stomach. This seems a fatal objection to a proposal which otherwise would solve an anxious problem. Dr. Senn is in favour of a two-step operation. In every case where delay is possible the fistula should not be established until the third or fifth day when adhesion will be firm enough to prevent gastric extravasation into the peritoneal sac. Meanwhile the patient must be supported by rectal feeding—four ounces every four or five hours. A full description is given of Witzel's ingenious suggestion for tunnelling—or rather forming an artificial tunnel in—the stomach wall to prevent the leakage of the gastric contents and its concomitant troubles. Witzel has employed this device in two cases with good result (*Centralbl. f. Chir.*, No. 32, 1891).

Perhaps the most important question discussed by Dr. Senn is the performance of gastrostomy with a twofold object in view—the immediate saving of life in cases of cicatricial contraction of the gullet, and the subsequent "retrograde dilatation" of the stricture through the opening so obtained. This operation has already been done with a certain amount of success. In summing up the case for operation the author arrives at the following important, among other, conclusions:—"Gastrostomy for malignant obstruction on the proximal side of the stomach, if performed at a time when the patient is sufficiently strong to survive the immediate effects of the operation, is a comparatively safe procedure, and adds from a few weeks to six or eight months to the patient's life." "Leakage from the fistula can be prevented most effectually by making the opening in the stomach small, by the use of an inflatable double rubber bulb through which the feeding tube reaches the stomach, or by making an oblique tunnel in the anterior wall of the stomach as devised and practised with success by Witzel." "Mastication of food, as a preliminary step to its introduction into the stomach, satisfies, at least in part, the sense of hunger, which is not always accomplished even by liberal exclusive gastric feeding through the fistula."

The essay it will be seen embraces all the most recent work on the subject and is worthy of careful attention. The subject is one that has always been of much interest to the writer since having had the opportunity of seeing Mr. Sydney Jones' case alluded to by Dr. Senn in which the patient survived for forty days. If that case taught any lesson it was this—delay is fatal both to the patient and to the operation. Once again let it be urged that in early resort lies the only chance of success. Not only is the recovery from the operation more certainly assured, but much is gained by early removal of the mechanical irritation of food—a point not touched on by Dr. Senn, but one of the greatest importance, especially in the delaying of the evolution of malignant growths. Otherwise surgery can offer no relief to humanity in the passage of that most terrible of all paths that lead to the valley of the shadow of death—the path of starvation.

PART IV.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

CLINICAL RECORDS.

A Case of Protracted Enteric Fever. By R. J. **Kinkead**, B.A., M.D., Univ. Dubl.; Professor of Obstetric Medicine and Lecturer in Forensic Medicine in Queen's College, Galway.

Three hundred years ago (1591) Forestus described the disease, which we now call enteric fever, under the name *Febris lenta*, from its long duration. In 1729 Strother, in his "Very Remarkable History of a Spotted Fever," spoke of the "Slow" or "Lent Fever," which could have been none other than enteric fever. Protracted as the duration of this fever not infrequently is, the following case is probably without a parallel. The patient was admitted to hospital after five weeks' illness, and was discharged convalescent after a sojourn in hospital extending over 18 weeks and 5 days.

Case.—Mrs. X., aged fifty-two, mother of a large family, a very stout woman, was admitted to hospital on Oct. 2, 1891, and discharged on Feb. 9, 1892. Five weeks before admission diarrhœa began, notwithstanding which she went to Dublin, remained there three or four days, came home, and had no medical advice or treatment for three weeks. She was then seen, prescribed for, and directed to remain in bed; but diarrhœa getting a little better she got up, went out, and continued at her household duties until Oct. 1, when diarrhœa still persisting, and feeling weak, she again sought advice.

All the symptoms of typhoid fever were well marked; numerous spots, abdomen tympanitic, pain, tenderness, and gurgling in right iliac fossa; temperature, 101·6°, rising to 103° in evening; stools, "pea-soup;" the urine scanty, of low specific gravity, and albuminous. Abdominal distension and pain increased, vomiting followed, and on Oct. 8 the respirations became slightly hurried. On morning of 9th there was dulness on percussion, and fine crepitus over base of left lung, up to within a couple of fingers' breadth of angle of scapula, extending

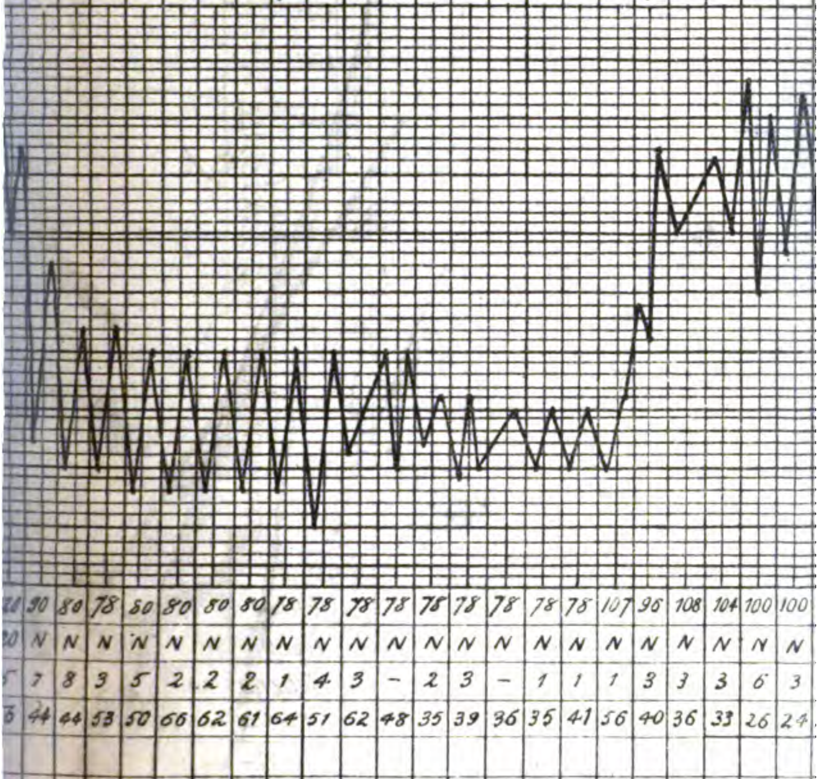
round to sub-mammary region; the pulse was we
the first cardiac sound short, but fairly good, the
tuated; mind clear, but patient very fretful and nervo
The urine steadily diminished in quantity; the albu
of lungs, the distension of the abdomen as steadily in
dry and dark brown, the face puffy and flushed, whe
hæmorrhage from the bowels occurred. On that day,
ing, she had six stools, at first nearly all liquid bloo
gradually getting more fæcal and less bloody, until the
last couple of stools on the 14th.

Although she was very much weakened by it, yet
hæmorrhage proved beneficial. The kidneys were d
the quantity of urine increased; the albumen diminish
the specific gravity rose. At the same time the lung sy
dulness and crepitus diminished, respirations became d
the temperature steadily fell, the abdomen was less d
patient progressed fairly well until Oct. 27—then she b
before. Both lungs were now engaged, dulness and
bases; respirations 36 to 40 per minute; pulse rapid,
cardiac sounds short and weak, with a peculiar, music
bruit at apex; frequent liquid stools, sometimes pass
scanty, albuminous, of low specific gravity; and occ
bladder power requiring use of catheter.

On Nov. 8—38 days after admission, 26 days after for
second attack of hæmorrhage from bowels occurred,
carried off the patient; it was decidedly more profuse,
than the first, and reduced her to a profoundly pros
However, she rallied, and the record for Nov. 9 to D
steady continuance of fever, with apparently abortiv
defervesce, most disheartening to deal with. If lungs
kidneys worked worse, or the abdominal symptoms becam
if abdominal distension declined, diarrhœa lessened, and
so marked, she would either take to vomiting, or the lun
ahead, and urine become scanty; if kidneys acted better,
abdomen gave trouble, and sometimes all together got b
failed, and the patient's condition appeared hopeless, whil
fresh spots kept coming out as the old ones faded away.
the stools began to thicken, and between 30th and 31st the
fell from 103·8° to 97·2°.

The fall in temperature was followed by an all-round in
The lungs cleared up, and respiration became normal; ur
abundant, and free from albumen; the pulse fell in rate,
fuller in volume; tongue became clean and moist; abdominal
disappeared, and stools became solid.

Recovery.



30	31	JAN 1892 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	90	80	78	80	80	80	80	78	78	78	78	78	78	78	78	78	107	96	108	104	100	100
	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	7	8	3	5	2	2	2	1	4	3	–	2	3	–	1	1	1	3	3	3	6	3
	44	44	53	50	66	62	61	64	51	62	48	35	39	36	35	41	56	40	36	33	26	24
14								15							16							

This happy condition continued for 16 days, when without any apparent cause, without any error in diet, without any worry of any kind, or mental anxiety to account for it, and without any warning whatever, the temperature rapidly rose from 97° to 102·4°—and except the lung mischief all the typhoid symptoms, spots included, returned. This new bout of fever lasted 14 days, terminating by a gradual fall of temperature.

She was discharged convalescent on Feb. 9, 1892, having been in hospital 18 weeks and 5 days. At this date, although the morning temperature had been but 9 days below the normal line, and the evening temperature only 5 days at normal range, it was deemed wise—considering the length of time she had been in a small hospital—to remove her from an atmosphere which must have been saturated with typhoid emanations. Although I learn from Dr. Brereton, who took charge of her during convalescence, that occasionally there have been rises of temperature of transient duration, she has steadily progressed on the road to health, except for an attack of bleeding from the throat, which occurred suddenly without any inflammation or pain, was decidedly profuse in quantity, and from behind and below the left tonsil. She woke up on the morning of March 11 spitting blood; the hæmorrhage continued till 2 a.m. on the 12th, and we controlled it with difficulty by small doses of ergot, vigorous swabbing with liq. ferri perchl., and the application of ice.

During the fever dietary and stimulation were attended with grave difficulties. At times digestive power and absorption seemed gone altogether; milk, even when diluted with soda-water or lime-water, passed in curds in the alvine evacuations; beaten-up yoke of egg passed off unchanged. On one occasion when sleep failed, and diarrhœa was profuse, opium and belladona pills were administered; in a few hours they appeared in the stools as perfect as when swallowed. If alcohol was withheld the heart immediately failed; on the other hand, it seemed when pushed, so as to keep the heart going, to bother the kidneys. The administration of a couple of ounces of gin in the day, along with whisky or champagne, solved the difficulty. Milk evidently disagreeing, whey was tried, but patient soon tired of it, and stomach kicked against it; then bread jelly was given, which she relished; it was well digested, and proved most satisfactory.

Quinine was well borne, but seemed absolutely inert—10 gr. doses, repeated in an hour, produced neither headache nor singing in the ears, nor deafness, nor did it affect the temperature. The only medicine which lowered temperature was Warburg's tincture in full doses, and wherever on the chart a high temperature is seen, followed by a sharp drop, and falls and rises of a couple of degrees, Warburg had been given.

Turpentine stupes relieved the abdominal distension. Sometimes, however, they had to be aided by 1 drachm doses by the mouth.

The first attack of hæmorrhage was met with ergot and turpentine; the second by ergot and hazalin, and it seemed to me that the latter acted better. Almost continuous dry cupping was kept up over the lumbar and thoracic regions; it not only appeared to relieve the kidneys, but had the distinct advantage of keeping patient off her back.

It is interesting to note the connection between rises of temperature and decrease in quantity of urine, and the albumen therein. Prior to and during rise of temperature, the face flushed if rise was about to be high or prolonged; the flush was peculiar, not in cheeks alone, but the forehead became puffy, then a bright red, smooth, shining, very similar in appearance to erysipelas.

Although the disease lasted so long, accompanied, too, by such marked digestive disturbance or profuse diarrhœa, the patient wasted very little; she was fat when admitted, and fairly fat when discharged. It goes without saying that such a case involved most arduous nursing and constant attendance. She was splendidly nursed by Nurses Kelly and Keys from the Ushers' Island, Dublin, Institution, and the fact that after 19 weeks she left hospital without a sign of a bed-sore, or the skin being even at any time abraded, speaks volumes for the nursing.

Acknowledgment is also due to Prof. Brereton for the valuable aid afforded me by him in daily consultation.

ERRORS IN HEALTH REPORTS.

The editor of the (Sacramento) *Occidental Medical Times* announces his discovery that "glaring errors are, unfortunately, frequent in the reports of health departments." In the June report for Denver, for instance, the estimated annual mortality ought to have been 19·04 instead of 10·03 per mille, at which it was stated. He illustrates his assertion by the reported statistics of five other large cities besides Denver. "Most of the discrepancies," he says, "were errors of arithmetic, but in some cases the rate was found in a very unique way. To find the annual rate, the number of deaths for the month was divided by the number of thousands of population. The quotient, of course, gives only the monthly rate, and as this seemed too small for an annual rate, the dilemma was solved by removing the decimal point one place to the right. This mistake occurs in a comparative mortality table published in the Minneapolis health report for June." The want of uniformity in reports is also a serious disadvantage. Each city chooses its own tables and computations, and classifies its own diseases in its own way. Some report weekly, others monthly. Some calculate mortality according to census, others according to estimated population. Thus great difficulties are thrown in the way of the comparative statistician.

SANITARY AND METEOROLOGICAL NOTES.

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Vital Statistics

For four Weeks ending Saturday, April 23, 1892.

The deaths registered in each of the four weeks in the sixteen principal Town Districts of Ireland, alphabetically arranged, corresponded to the following annual rates per 1,000:—

Towns	Weeks ending				Towns	Weeks ending			
	April 2.	April 9.	April 16.	April 23.		April 2.	April 9.	April 16.	April 23.
Armagh -	21·0	14·0	7·0	42·0	Limerick -	46·3	23·9	14·0	28·1
Belfast -	32·4	38·1	30·2	35·9	Lisburn -	34·3	30·0	30·0	25·7
Cork -	31·8	28·4	39·4	29·1	Londonderry	31·4	14·1	15·7	14·1
Drogheda	30·7	13·2	4·4	13·2	Lurgan -	13·7	18·2	31·9	18·2
Dublin -	35·9	32·7	29·8	35·1	Newry -	12·1	36·2	16·1	16·1
Dundalk -	41·9	29·3	20·9	16·8	Sligo -	36·1	20·6	20·6	15·5
Galway -	45·3	37·8	75·6	34·0	Waterford -	25·0	15·0	15·0	22·5
Kilkenny	42·5	42·5	0·0	18·9	Wexford -	27·1	18·1	18·1	40·6

In the week ending Saturday, April 2, 1892, the mortality in thirty-three large English towns, including London (in which the rate was 21·4), was equal to an average annual death-rate of 22·2 per 1,000 persons living. The average rate for eight principal towns of Scotland was 21·2 per 1,000. In Glasgow the rate was 23·5, and in Edinburgh it was 18·5.

The average annual death-rate represented by the deaths registered during the week in the sixteen principal town districts of Ireland was 33·9 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 3·7 per 1,000, the rates varying from 0·0 in ten of the districts to 5·3 in Belfast—the 159 deaths from all causes registered in that district comprising 17 from measles, 4 from whooping-cough, 1 from simple continued fever, 4 from enteric fever, 26 from phthisis, and 45 from diseases of the respiratory system. Among the 46 deaths from all causes registered in Cork are—1 from measles, 1 from whooping-cough, 2 from phthisis, and 15 from diseases of the respiratory system. The 33 deaths in Limerick comprise 1 from scarlatina and 1 from enteric fever, and the 20 deaths in Londonderry comprise 1 from whooping-cough and 1 from enteric fever.

In the Dublin Registration District the registered births amounted to 217—103 boys and 114 girls; and the registered deaths to 250—110 males and 140 females.

The deaths, which are 38 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 37·3 in every 1,000 of the population. Omitting the deaths (numbering 9) of persons admitted into public institutions from localities outside the district, the rate was 35·9 per 1,000. During the first thirteen weeks of the current year the death-rate averaged 38·4, and was 5·8 over the mean rate in the corresponding period of the ten years 1882–1891.

The number of deaths from zymotic diseases registered is 40, being 1 over the number for the preceding week, and 17 in excess of the average for the thirteenth week of the last ten years. The 40 deaths comprise 24 from measles (being 2 over the number of deaths from that disease in the preceding week), 2 from influenza and its complications, 3 from whooping-cough, 1 from enteric fever, 1 from diarrhœa, and 1 from dysentery.

The cases of measles admitted to hospital amounted to 58, against 48 for the preceding week and 21 for the week ended March 19. Thirty measles patients were discharged, 10 died, and 118 remained under treatment on Saturday, being 18 over the number in hospital at the close of the preceding week.

Only 2 cases of enteric fever were admitted to hospital against 3 for each of the two weeks preceding. Five patients were discharged, and 44 remained under treatment on Saturday, being 3 under the number in hospital on Saturday, March 26.

Five cases of scarlatina and 2 of typhus were received during the week: 16 cases of the former and 3 of the latter disease remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system amount to 70, or 24 in excess of the average for the corresponding week of the last ten years, and 7 over the number for the week ended March 26. They comprise 45 from bronchitis, 17 from pneumonia or inflammation of the lungs, and 1 from pleurisy.

In the week ending Saturday, April 9, the mortality in thirty-three large English towns, including London (in which the rate was 22·3), was equal to an average annual death-rate of 23·3 per 1,000 persons living. The average rate for eight principal towns of Scotland was 24·1 per 1,000. In Glasgow the rate was 27·7, and in Edinburgh it was 20·2.

The average annual death-rate in the sixteen principal town districts of Ireland was 31·6 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 4·2 per 1,000, the rates varying from 0·0 in nine of the districts to 8·1 in Newry—the 9 deaths from all causes registered in that district comprising 2 from diarrhœa. Among the 187 deaths from all causes registered in Belfast are—20 from measles (an increase of 3 as compared with the number for the preceding week), 6 from whooping-cough, 1 from diphtheria, 3 from enteric fever, 4 from diarrhœa, 31 from phthisis, and 42 from diseases of the respiratory system. The 41 deaths in Cork comprise 2 from typhus and 1 from enteric fever, and the 9 deaths in Londonderry comprise 2 from whooping-cough.

In the Dublin Registration District the registered births amounted to 199—101 boys and 98 girls; and the registered deaths to 221—101 males and 120 females.

The deaths, which are 16 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 33·0 in every 1,000 of the population. Omitting the deaths (numbering 2) of persons admitted into public institutions from localities outside the district, the rate was 32·7 per 1,000. During the first fourteen weeks of the current year the death-rate averaged 38·0, and was 5·6 over the mean rate in the corresponding period of the ten years 1882–1891.

The number of deaths from zymotic diseases registered is 36, being 4 under the number for the preceding week, but 13 over the average for the fourteenth week of the last ten years. They comprise 23 from measles (being 1 under the number from that disease in the preceding week), 1 from scarlet fever (scarlatina), 3 from influenza, 3 from whooping-cough, 1 from ill-defined fever, and 1 from dysentery,

The number of cases of measles admitted to hospital is 50, being a decline of 8 as compared with the admissions for the preceding week, but 2 over the number for the week ended March 26. Twenty-three measles patients were discharged, 7 died, and 138 remained under treatment on Saturday, being 20 over the number in hospital at the close of the preceding week.

Four cases of enteric fever were admitted to hospital against 2 for the preceding week. Thirteen patients were discharged, 1 patient died. and 34 patients remained under treatment on Saturday, being 10 under the number in hospital on Saturday, April 2.

The hospital admissions for the week include, also, 2 cases of scarlatina and 1 case of typhus: 15 cases of the former and 4 of the latter disease remained under treatment in hospital on Saturday.

Deaths from diseases of the respiratory system, which had risen from 63 for the week ended March 26, to 70 for the following week, fell to 45, or 3 under the average for the corresponding week of the last ten years. The 45 deaths consist of 32 from bronchitis and 13 from pneumonia or inflammation of the lungs.

In the week ending Saturday, April 16, the mortality in thirty-three large English towns, including London (in which the rate was 19·4), was equal to an average annual death-rate of 20·9 per 1,000 persons living. The average rate for eight principal towns of Scotland was 22·5 per 1,000. In Glasgow the rate was 25·5, and in Edinburgh it was 19·8.

The average annual death-rate represented by the deaths registered in the sixteen principal town districts of Ireland was 28·5 per 1,000 of the unrevised population based on the Census of 1891.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 3·4 per 1,000, the rates varying from 0·0 in twelve of the districts to 5·2 in Sligo—the 4 deaths from all causes registered in that district comprising 1 from diarrhœa. Among the 148 deaths from all causes registered in Belfast are—13 from measles (being 7 under the number from that cause in Belfast in the preceding week), 1 from scarlatina, 1 from typhus, 3 from whooping-cough, 1 from diphtheria, 1 from simple continued fever, and 3 from diarrhœa. The 57 deaths from all causes registered in Cork comprise 2 from measles, 1 from whooping-cough, 1 from simple continued fever, and 1 from enteric fever.

In the Dublin Registration District the registered births amounted to 161—85 boys and 76 girls; and the registered deaths to 205—99 males and 106 females.

The deaths, which are 14 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 30·6 in every 1,000 of the population. Omitting the deaths (numbering 5) of persons admitted into public institutions from localities outside the district, the rate was 29·8 per 1,000. During the first fifteen weeks of the current year the death-rate averaged 37·5, and was 5·3 over the mean rate in the corresponding period of the ten years 1882–1891.

Zymotic diseases caused 36 deaths, being equal to the number for the preceding week, and 15 in excess of the average for the fifteenth week of the last ten years. The 36 deaths comprise 14 from measles (being 9 under the number from that cause in the preceding week), 2 from typhus, 2 from influenza and its complications, 5 from whooping-cough, 2 from diphtheria, 4 from enteric fever, and 2 from dysentery.

Eighty-nine cases of measles were admitted to hospital, being 39 in excess of the admissions for the preceding week, which showed a decrease of 8 as compared with the number for the week ended April 2. Fifty-eight measles patients were discharged, 5 died, and 164 remained under treatment on Saturday, being 26 over the number in hospital at the close of the preceding week.

Six cases of enteric fever were admitted to hospital against 4 for the preceding week and 2 for the week ended April 2. Nine patients were discharged, 1 died, and 30 remained under treatment on Saturday, being 4 under the number in hospital on Saturday, April 9.

The hospital admissions for the week include, also, 3 cases of scarlatina and 1 case of typhus: 12 cases of the former and 2 of the latter disease remained under treatment in hospital on Saturday.

As in the week preceding, 45 deaths from diseases of the respiratory system were registered. These comprise 26 from bronchitis, and 14 from pneumonia or inflammation of the lungs. The average number of deaths from diseases in this group during the fifteenth week of the last ten years was 40.

In the week ending Saturday, April 23, the mortality in thirty-three large English towns, including London (in which the rate was 21·0), was equal to an average annual death-rate of 21·8 per 1,000 persons living. The average rate for eight principal towns of Scotland was 22·3 per 1,000. In Glasgow the rate was 26·0, and in Edinburgh it was 18·5.

The average annual death-rate in the sixteen principal town districts of Ireland was 31·9 per 1,000 of the population (unrevised) according to the recent Census.

The deaths from the principal zymotic diseases registered in the sixteen districts were equal to an annual rate of 5·2 per 1,000, the rates varying from 0·0 in ten of the districts to 10·3 in Sligo—the 3 deaths from all causes registered in that district comprising 1 from scarlatina and 1 from typhus. Among the 176 deaths from all causes registered in Belfast are—13 from measles (an increase of 5 as compared with the number for the preceding week), 2 from scarlatina, 4 from whooping-cough, 1 from diphtheria, 1 from simple continued fever, 2 from enteric fever, and 4 from diarrhœa. The 42 deaths in Cork comprise 3 from measles, 1 from typhus, and 1 from diphtheria. Among the 9 deaths in Galway are—1 from whooping-cough and 1 from diarrhœa. The 3 deaths in Drogheda comprise 1 from typhus and 1 from diphtheria.

In the Dublin Registration District the registered births amounted to 176—91 boys and 85 girls; and the registered deaths to 240—125 males and 115 females.

The deaths, which are 43 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of

35·8 in every 1,000 of the population. Omitting the deaths (numbering of persons admitted into public institutions from localities outside district, the rate was 35·1 per 1,000. During the first sixteen weeks the current year the death-rate averaged 37·4, and was 5·4 over the mean rate in the corresponding period of the ten years 1882–1891.

As many as 55 deaths from zymotic diseases were registered, being in excess of the average for the corresponding week of the last ten years and 19 over the number for the week ended April 16. They comprise 33 from measles (against 14 from that cause for the preceding week), from influenza and its complications, 10 from whooping-cough, 1 from enteric fever, and 2 from diarrhœa.

The number of cases of measles admitted to hospital during the week is 73, being a decline of 16 as compared with the admissions for the preceding week, which were 39 in excess of the number for the week ended April 9. Fifty-seven measles patients were discharged, 6 died, and 174 remained under treatment on Saturday, being 10 over the number in hospital at the close of the preceding week.

Only 3 cases of enteric fever were admitted to hospital, being 3 under the admissions for the preceding week, and 1 under the number for the week ended April 9. Six patients were discharged, and 27 remained under treatment on Saturday, being 3 under the number in hospital on Saturday, April 16.

The hospital admissions for the week include, also, 3 cases of scarlatina, but no cases of typhus were received: 13 cases of the former and 1 case of the latter disease remained under treatment in hospital on Saturday.

Forty-six deaths from diseases of the respiratory system were registered, being 3 over the average for the corresponding week of the last ten years and 1 over the number for the week ended April 16. They comprise 29 from bronchitis and 16 from pneumonia or inflammation of the lungs.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ N *Long.* 6° 15′ *W., for the Month of April,* 1892.

Mean Height of Barometer, - - - -	30·039 inches
Maximal Height of Barometer (on 1st, at 9 a.m.), -	30·506 „
Minimal Height of Barometer (on 27th, at 9 a.m.) -	29·655 „
Mean Dry-bulb Temperature, - - - -	45·3°.
Mean Wet-bulb Temperature, - - - -	42·2°.
Mean Dew-point Temperature, - - - -	38·7°.
Mean Elastic Force (Tension) of Aqueous Vapour, -	·239 inch.
Mean Humidity, - - - - -	78·2 per cent.

Highest Temperature in Shade (on 20th) - -	63·8°.
Lowest Temperature in Shade (on 15th), - -	27·3°.
Lowest Temperature on Grass (Radiation) (on 15th),	22·0°.
Mean Amount of Cloud, - - - -	42·7 per cent.
Rainfall (on 13 days), - - - -	1·114 inches.
Greatest Daily Rainfall (on 24th), - - -	·410 inch.
General Directions of Wind, - - -	N.W., E.N.E

Remarks.

Like April, 1891, this was a cold, rather dry and March-like month. The mean temperature, rainfall, and rainy days were all below the average. On six days, indeed, the thermometer rose above 60° in the shade, but on five nights it fell below 32°, even in the screen.

In Dublin the arithmetical mean temperature (46·2°) was 1·5° below the average (47·7°); the mean dry bulb readings at 9 a.m. and 9 p.m. were 45·3°. In the twenty-seven years ending with 1891, April was coldest in 1879 (the cold year) (M. T. = 44·5°), and warmest in 1865 and 1874(M. T. = 50·4°). In 1886 the M. T. was 46·3°, in 1887 it was as low as 45·1°, in 1888 it was (as in 1891) only 45·7°, in 1889 it was 46·1°, and in 1890 it was 47·3°.

The mean height of the barometer was 30·039 inches, or 0·189 inch above the average value for April—namely, 29·850 inches. The mercury was as high as 30·506 inches at 9 a.m. of the 1st, and fell to 29·655 inches at 9 a.m. of the 27th. The observed range of atmospherical pressure was, therefore, 0·851 inches—that is, a little less than nine-tenths of an inch.

The mean temperature deduced from daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. was 45·3°, or 7·5° above the value for March, 1892. Using the formula, *Mean Temp.* = *Min.* + (*max*—*min.* × ·476), the value becomes 45·8°, or 1·6° below the average mean temperature for April, calculated in the same way, in the twenty-five years, 1865–89, inclusive (47·4°). The arithmetical mean of the maximal and minimal readings was 46·2°, compared with a twenty-five years' (1865–1889 inclusive) average of 47·7°. On the 20th the thermometer in the screen rose to 63·8°—wind, S.W.; on the 15th the temperature fell to 27·3°—wind, N.N.W. The minimum on the grass was 22·0° also on the 15th.

The rainfall was only 1·114 inches, distributed over 13 days. The average rainfall for April in the twenty-five years, 1865–89, inclusive, was 2·055 inches, and the average number of rainy days was 15·2. The rainfall, therefore, was considerably below the average, while the rainy days were also deficient. In 1877 the rainfall in April was very large—4·707 inches on 21 days; in 1882 also 3·526 inches fell on 20 days. On the other hand, in 1873, only ·498 of an inch was measured on 8 days; and in 1870 only ·838 of an inch fell, also on 8 days. The fall in 1890 was 1·575 inches on 14 days, and in 1891, 1·553 inches fell on 14 days.

Solar halos were seen on the 7th and 30th. There was a lunar halo on the 7th. The atmosphere was more or less foggy on the 1st, 2nd, 6th, 7th, 10th, 11th, 12th, 14th, 18th, and 19th. High winds were noted on only 3 days, and did not reach the force of a gale on any occasion. Snow or sleet fell on the 13th and four following days, while hail fell on the 13th, 14th, 15th, 16th, 18th, 25th, 26th, and 27th. The temperature exceeded 50° in the screen on 24 days, compared with 18 days in April, 1891, 7 days in March, 6 in February, and 6 in January. It rose above 60° on 6 days, and fell below 32° in the screen on 5 nights. The minima on the grass were 32°, or less, on 14 nights, compared with 25 nights in March, 16 in February, and 25 in January. The mean lowest temperature on the grass was 32·4°, compared with 34·1° in 1891 and 1890, 34·4° in 1889, 34·6° in 1888, and 31·6° in 1887.

The first two days of the month were beautiful, calm and frosty by night, brilliant by day with light easterly sea breezes. The diurnal range of temperature was extremely large at inland stations—thus on Friday, the 1st, at Loughborough, in Leicestershire, the minimum was 26° and the maximum was 72°—range 46°; at Parsonstown the corresponding values were—28° and 68°, range 40°,

Most favourable weather prevailed during the week ended Saturday, the 9th. The range of atmospherical pressure was especially small, and temperature was much higher than for a long time past—the advance on the previous week being no less than 10·5°. Although the barometrical range was not large, the changes in pressure were frequent and irregular—particularly between Sunday and Wednesday, when rain fell in Ireland, Scotland, and Wales, but not heavily. In the interval from Tuesday evening to Thursday evening thunder and lightning occurred over France, the western half of the English Channel, and the extreme southwest of Ireland—the electrical disturbances seemed to pass in a northwesterly direction, skirting the southwestern edge of an anticyclone of no great height, which formed over the British Islands on Tuesday evening. Some very high day temperatures for the time of year (70° to 73°) were recorded daily in England up to Thursday, when temperature began to give way generally under the influence of a freshening easterly wind. Much haze and fog accompanied this fall of temperature—at least at night. The days, however, were fair and bright after Thursday. In Dublin the mean atmospherical pressure was 29·993 inches, the barometer being observed to range between 30·219 inches at 9 a.m. of Sunday (wind, E.), and 29·916 inches at 9 p.m. of Monday (wind, S.W.). The corrected mean temperature was 49·9°, or 10·5° above the value for the preceding week. The daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. were on an average 48·8°. The shade thermometers rose to 62·4°

n Monday, having fallen to 40·2° on Sunday. Rain was measured on two days to the amount of ·073 inch, ·043 inch being credited to Tuesday and ·030 inch to Monday. The prevailing winds were E. and E.N.E.

The week ended Saturday, the 16th, witnessed a plunge into midwinter ith its attendant frosts and snows. The mean temperature was no less han 9·1° lower than that of the previous week (40·8° compared with 49·9°) and nearly all the precipitation was in the form of snow and hail. At the beginning the weather was fine and dry as well as moderately arm with light easterly breezes by day and some haze or fog by night, hen the air periodically fell calm. During this period the diurnal range f temperature was very large at inland stations—at Cambridge the ermometer fell from 70° on Sunday the 10th to 29° during the ensuing ght; at Parsonstown the extremes in the same time were—max. 67°, m. 31°. In Dublin the range was much less—max. 53·6°, min. 38·9° on nday. On Tuesday depressions began to pass southwards across andinavia and the North Sea, with the result that the wind freshened m N.W., N., and N.E., and falls of cold rain, hail, and snow became ry general. This state of things lasted to the close of the week, which as proved very inclement. In Dublin the mean height of the barometer 29·849 inches, pressure ranging between 30·004 inches at 9 a.m. of day (wind E.N.E.), and 29·662 inches at 2 p.m. of Saturday (wind N.E.). The corrected mean temperature was 40·8°. The mean dry lb readings at 9 a.m. and 9 p.m. were 40·0°. The screened thermometers to 56·6° on Monday and fell to 27·3° on Friday, when also the grass nimum was only 22·0°. The rainfall amounted to ·283 inch on three ays. It was almost entirely in the form of snow and hail. On Tuesday he measurement was ·176 inch. The prevailing winds were N.E. and W. At first the nights were calm and foggy.

Opening with very severe winterly weather, the week ended Saturday, 23rd, ultimately proved very favourable, genial and springlike. The an temperature of Easter Day, 1892, was in Dublin only 36·0°, or below that of Christmas Day, 1891. In the early morning the und was covered with snow, and snow and sleet fell in frequent wers during the afternoon. Monday was fine, but very cold, with a y nipping air—at night sharp frost occurred, the thermometer falling 29·3° in the screen and to 23·4° on the grass. On Tuesday a change much milder weather began. Up to this time the barometer had been est over the North Sea, highest off the west of Ireland—hence a evalence of northerly winds and low temperatures. From Tuesday wards the area of lowest pressure was found in the N.W. and N., so at southwesterly to westerly winds predominated, accompanied by much gher temperatures and passing showers at times. A wave of high essure passed eastwards over the country on Friday night, and was llowed by a new depression in the northwest on Saturday, causing a much-needed fall of rain on the afternoon of that day. In Dublin the mean height of the barometer was 30·190 inches, pressure ranging from 29·868 inches at 9 a.m. of Sunday (wind, N.) to 30·429 inches at 9 a.m. of Saturday (wind W. by N.). The corrected mean temperature was 47·3°. The mean dry bulb readings at 9 a.m. and 9 p.m. were 47·4°. The screened thermometers fell to 28·1° on Sunday and rose to 63·8° on Wednesday. Rain fell in measurable quantity on four days to the amount of ·163 inch, of which ·125 inch was collected on Saturday. The prevailing winds were—first, N,; afterwards S.W. and W. An aurora borealis appeared on Saturday night.

Changeable, rather cold, but not unfavourable weather held throughout the week ended Saturday, the 30th. The general tendency was for the advance over Northern and Western Europe of numerous depressions, of no great depth, from the northwestward. These systems kept the weather in an unsettled, rainy or showery state, while varying winds from Polar quarters (N.W. to E.) prevailed. The night temperatures were decidedly low, and notwithstanding many intervals of bright sunshine very little advance in temperature occurred even by day. The most striking feature of the week was a splendid display of aurora borealis on Monday night—it was seen from most parts of the British Isles. In central and eastern England heavy showers of hail and sleet, accompanied by thunder and lightning, fell on Monday, Tuesday, and Wednesday. In Dublin also hail fell on each of these days, there was a heavy downpour of rain on Sunday night, and a cold rain set in on Friday shortly after midnight, which fell in the form of snow on the mountains south of the city. In Dublin the mean height of the barometer was 30·014 inches, pressure varying between 30·411 inches at 9 a.m. of Sunday (wind, N.W.), and 29·655 inches at 9 a.m. of Wednesday (wind, W.N.W.). The corrected mean temperature was 45·6°, or 1·7° below that of the preceding week. The mean dry bulb readings at 9 a.m. and 9 p.m. were 45·4°. On Saturday the thermometers in the screen rose to 57·8°, having been down to 33·9° during the previous night. The rainfall was ·595 inch on four days. Of this quantity ·410 inch was entered to Sunday. The prevailing wind was northwesterly.

The rainfall in Dublin during the four months ending April 30th has amounted to 5·922 inches on 61 days compared with only 3·2[illegible]3 inches on 46 days during the same period in 1891, 9·045 inches on 5[illegible] days in 1890, 8·345 inches on 74 days in 1889, 8·090 inches on 58 days in 1888, and a 25 years' average of 8·466 inches on 66·2 days.

At Knockdolian, Greystones, Co. Wicklow, the rainfall during April, 1892, amounted to only ·648 of an inch, distributed over 10 days; ·25[illegible] inch falling on the 24th. The total fall since January 1st, 1892, equals only 4·853 inches on 50 days.

PERISCOPE.

PRESENTATION TO SIR GEORGE BUCHANAN, F.R.S.

s our readers are doubtless aware, Sir George Buchanan has lately esigned the post of Medical Officer of the Local Government Board for ngland. A Committee has been formed with a view to forwarding a ovement for enabling those interested in public health throughout the untry to give expression to the high estimation in which they hold the portant work which Sir George Buchanan has done and for affording me opportunity for the recognition of his conspicuous services in the use of Preventive Medicine. Under these circumstances it has been cided to open a subscription list (not to exceed two guineas from each ntributor) with a view to presenting to Sir George Buchanan some rmanent memento of the esteem in which he and his work are held. he Council of the Society of Medical Officers of Health has expressed a sire to be associated with the Committee in inviting subscriptions to e fund. Dr. J. S. Bristowe is the hon. treasurer. The honorary cretaries, to whom contributions may be sent, are—W. H. Hamer, Esq., dywell, 69 Dartmouth Park Hill, London, N.W., and J. C. Thresh, q., The Limes, Chelmsford, Essex.

BACILLUS LEPRÆ.

CCORDING to the *Occidental Medical Times*, this microbe, which had been covered after laborious research, has been lost again. The Indian prosy Commission have not succeeded in cultivating their bacillus. fter submitting it to Fränkel and Baumgarten, they declare that their ltivated product is not morphologically identical with the bacillus of prosy. The new bacillus is the "Bacillus epidermidis," identical with e carcinoma bacillus. So, at least, Baumgarten says.

LAPAROTOMY FOR INTESTINAL PERFORATION IN ENTERIC FEVER.

R. WELLER VAN HOOK reports (*Medical News*, Philadelphia, November 1, 1891) a successful case of laparotomy for perforation in enteric fever. he operation was done 9½ hours after perforation, the opening was out 2 mm. in diameter; three longitudinal rows of Lembert sutures ere used.

HYPERPYREXIA IN ACUTE RHEUMATISM.

R ALEX. ROBERTSON reports (*Glasgow Medical Journal*, November, 91) a case of hyperpyrexia in acute rheumatism. The highest temrature observed was 106·8°. The patient was put into a bath at 90° F., which was reduced by the addition of cold water to 71°. The patient was kept in the water for twenty-five minutes, at the end of which time the temperature was 101·4° F., and the pulse had fallen from 160 to 120. Five minutes after being placed in bed the temperature had fallen to 97·2°. The case ended in recovery, but pre-systolic murmur at the apex was established.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

Therapeutical Novelties.

Messrs. Burroughs, Wellcome, and Co., of Snow Hill Buildings, London, E.C., have placed in our hands a number of preparations which they have recently introduced :—

1. The first of these preparations is called "Malto-Ricine." It is a mixture of Kepler Extract of Malt, with 50 per cent. of the finest castor oil—hence the name. So intimately mixed are the ingredients that this Kepler Extract of castor oil and malt extract may be described as a solution rather than as an emulsion. The malt extract sufficiently cloaks the disagreeable taste of castor oil, so that this preparation will no doubt be readily taken by children. The dose varies from one to four teaspoonfuls, and it may be taken plain or mixed with milk.

2. "Hazeline Snow" is a very elegant emollient toilet preparation of hazeline (50 per cent.), lanoline, and presumably oxide of zinc. It rubs in thoroughly, so that it leaves no trace of greasiness behind it. As a remedy for chapped hands this ointment promises to surpass all previous claimants for public favour.

3. The "Compound Menthol Snuff" is stated to be composed of menthol, chloride of ammonium, cocain, lycopodium, and camphor. It is an agreeable combination for insufflation in coryza, and is of course possessed of both anodyne and antiseptic properties.

4. Mr. Hugh Lane, in his work on "Differentiation in Rheumatic Diseases," of which the second edition has just been published by Messrs. J. & A. Churchill, of London, speaks highly of a combination of sulphur, salicylate of quinine, and benzoate of lithium, as an excellent remedy in chronic rheumatic arthritis. Messrs. Burroughs, Wellcome, & Co. has made up his formula in tabloid form. Each sugar-coated tabloid consists of 2 grains of precipitated sulphur, one-third of a grain of salicylate quinine, 3 grains of benzoate of lithia, saccharin, &c., 100 parts. Five to seven of these tabloids may be taken every morning, and this treatment—according to Mr. Lane—persevered in for some time, hardly ever fails to produce more or less good results—even in obstinate cases chronic rheumatic arthritis.

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FOR
SEVENTEEN APPOINTMENTS
AS
Surgeon in Her Majesty's Indian Medical Service
WILL BE HELD
In London on the 8th February, 1892,
AND FOLLOWING DAYS.

Copies of the Regulations for the Examination, with information regarding the Pay and Retiring Allowances, &c., of Indian Medical Officers, may be obtained from the Military Secretary, India Office, London, S.W., to whom the necessary Certificates must be sent so as to reach him not later than Monday, 25th January, 1892.

O. R. NEWMARCH, MAJOR-GENERAL,
Military Secretary.

ARMY MEDICAL DEPARTMENT,
WAR OFFICE,
18th November, 1891.

AN EXAMINATION OF CANDIDATES
FOR
TWENTY-FIVE COMMISSIONS
IN
The Medical Staff of Her Majesty's Army,
WILL BE HELD AT
THE UNIVERSITY OF LONDON, BURLINGTON GARDENS, W.
(By permission of the Senate),
On the 8th of FEBRUARY next, and following days.

Application for Admission to the Examination should be made in writing without delay, to the Director-General, Army Medical Department, War Office, London, S.W.

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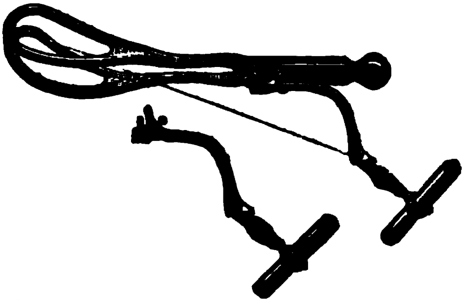

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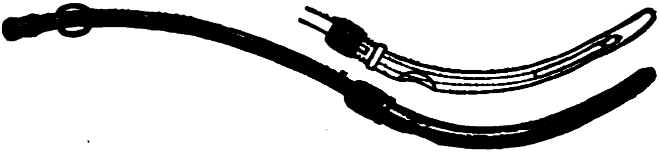

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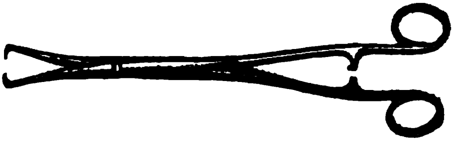

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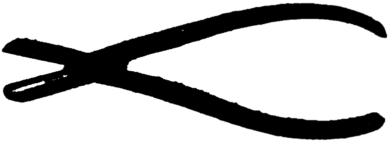

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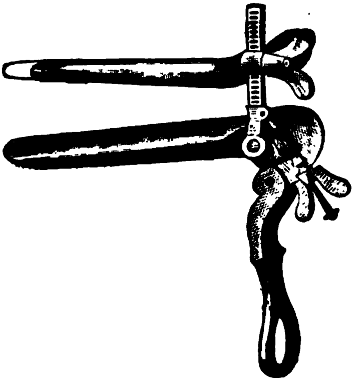

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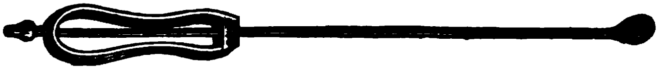

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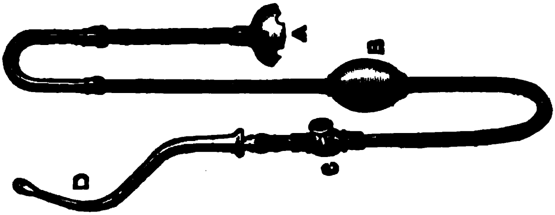

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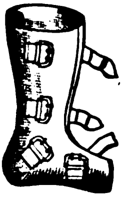

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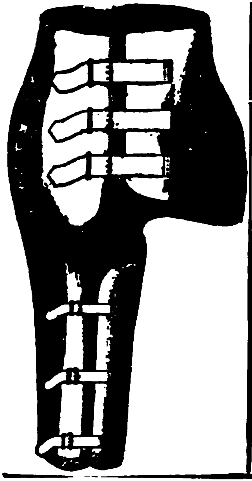

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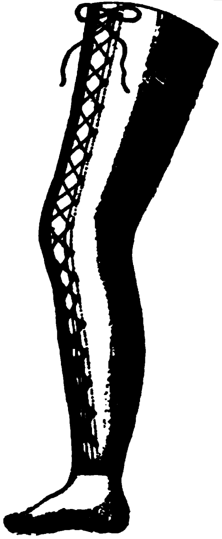

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FRANCE.

33. Répertoire de Pharmacie, Archives de Pharmacie, et Journal de Chimie Médicale réunis. Troisième Série. Paris: M. C. Crinon.
34. Gazette Médicale de Paris. Paris: 4, Place Saint-Michel.
35. Journal de Pharmacie et de Chimie &c. Paris: Victor Masson.
36. L'Union Médicale. Paris: Bureau, Rue de la Grange-Batelière.
37. Archives Générales de Médecine. Paris: Asselin.
38. Bulletin de l'Académie de Médecine. Paris: G. Masson.
39. Revue de Thérapeutique Médico-Chirurgicale. Paris: Masson.
40. Annales Médico-Psychologiques. Par MM. Baillarger, Cerise, et Lunire. Paris: V. Masson.
41. Bulletin Général de Thérapeutique. Médicale et Chirurgicale. Par le Docteur Félix Bricheteau. Paris.
42. Répertoire de Pharmacie. Par M. Eug. Lebaigue. Paris: Rue de la Perle, 11.
43. Annales de Gynécologie. Paris: H. Lauwereyns.
44. Gazette des Hôpitaux. Paris: 4, Rue de l'Odèon.
45. Lyon Médical, Organe Officiel de la Société Impériale de Médecine. Lyon: Mégret.
46. Revue des Sciences Médicales en France et à l'étranger. Paris: G. Masson.
47. Gazette Hebdomadaire. Paris: 91, Rue de Lille.
48. Revue de Médecine et Revue de Chirurgie.
49. Revue de Laryngologie, d'Otologie, et de Rhinologie. Paris: Octave Doin.
50. Annales des Maladies des Organes Génito-Urinaires. Paris: 22, Place St. Georges.

List of Exchange Journals.

BELGIUM.

51. Bulletin de l'Académie Royale de Médecine de Belgique. Bruxelles: F. Hayez.

52. Annales d'Oculistique. Bruxelles.

GERMANY.

53. Archiv für Gynækologie. Redigirt von Credé und Spiegelberg. Berlin: August Hirschwald.

54. Centralblatt für die medicinischen Wissenschaften. Berlin: August Hirschwald.

55. Jahrbuch für Kinderheilkunde und physische Erziehung. Leipzig: B. G. Teubner.

56. Archiv für pathologische Anatomi und Physiologie, &c. Herausgegeben von R. Virchow. Berlin: G. Reimer.

57. Berliner klinische Wochenschrift Berlin: Hirschwald.

58. Archiv für klinische Chirurgie. Herausgegeben von Dr. B. von Langenbeck. Berlin: Hirschwald.

59. Archiv für Psychiatrie und Nervenkrankheiten. Berlin: August Hirschwald.

60. Zeitschrift für physiologische Chemie. Herausgegeben von F. Hoppe-Seyler. Strassburg: Karl J. Trübner.

61. Deutsche Medizinal-Zeitung. Herausgegeben von Dr. Julius Grosser. Berlin: Eugen Grosser.

62. Albrecht von Graefe's Archiv für Ophthalmologie. Göttingen: Professor Dr. Th. Leber.

63. Centralblatt für klinische Medicin, und Centralblatt für Gynäkologie. Berlin: Hirschwald.

NORWAY.

64. Norsk Magazin for Lægevidenskaben. Udgivet af det medicinske Selskab i Christiania. Christiania: Paa Th. Steen, Forlag.

SWEDEN.

65. Hygiea, medicinsk och farmaceutisk Maonads-skrift. Stockholm: P. A. Norstedt och Söners förlag.

66. Nordiskt medicinskt Arkiv. Redigeradt af Dr. Axel Key, Prof. i Patolog. Anat. i Stockholm. Stockholm: Samson och Wallin.

67. Upsala Läkareförenings Förhandingar. Upsala: Ed. Berling.

DENMARK.

68. Hospitals-Tidende. Optegnelser ai praktisk Lægekunst fra Ind- og Udlandet. Kjöbenhavn: Jacob Lund. London: Asher and Co.

69. Bibliothek for Læger. Kjöbenhavn: C. A. Reitzels Forlag.

70. Ugeskrift for Læger. Kjöbenhavn C. A. Reitzels Forlag.

ITALY.

71. Lo Sperimentale, Giornale Critico di Medicina e Chirurgia per servire ai Bisogni dell' Arte Salutare. Direttore Prof. C. C. M. Butalini. 35, Via Alfani, Florence.

AUSTRALASIA.

72. The Australasian Medical Gazette. Sydney: L. Bruck.

BOOKS, PAMPHLETS, AND PERIODICALS RECEIVED—JAN., 1892.

1. A. B. C. of the Swedish System of Educational Gymnastics. By Hartvig Nissen. Philadelphia and London: F. A. Davis. 1891. 8vo. Pp. 107.

2. Handbook of Materia Medica, Pharmacy, and Therapeutics. By Sam'l D. L. Potter, A.M., M.D. (Jeff'n), M.R.C.P. (Lond.). Third Edition. Philadelphia: P. Blakiston, Son, & Co. 1891. 8vo. Pp. 767.

3. A Manual of Operative Surgery. By Frederick Treves, F.R.C.S. London: Cassell & Co. 1891. Medium 8vo. Two Volumes. Pp. 775 and 775.

4. The Brooklyn Medical Journal. Vol. 5. No. 11. November, 1891.

5. Bulletin of the Johns Hopkins Hospital. Volume II. No. 17. Baltimore. October, 1891.

6. Annales de la Policlinique de Bordeaux. No. 7. Octobre, 1891. Bordeaux: Feret et Fils.

7. The Dundee Advertiser. November 23 and 24, 1891.

8. On the Influence of one Fever on another. By H. Noble Joynt, M.A., M.D. Reprint. Pp. 5.

9. A History of Medical Education from the most remote to the most recent Times. By Dr. Theodor Puschmann. Translated and edited by Evan H. Hare, M.A. Oxon. London: H. K. Lewis. 1891. 8vo. Pp. 650.

10. Ichthyol. By T. Cranstoun Charles, M.D. Reprint. Pp. 12. 1891.

11. Nouvelles Observations concernant l'action thérapeutique de l'Ichthyol. Par A. Stocquart. Tamines. 1891. Pp. 8.

12. Die Behandlung des Erysipels. Von. Dr. Stanislaus Klein. Berlin. 1891. Pp. 12.

13. World Wide Missions. Vol. IV. No. 4. November, 1891.

14. Inherited Consumption and its Remedial Management. By William Dale, M.D. Lond. London: H. K. Lewis. 1891. Pp. 37.

15. Refraction of the Eye. By A. Stanford Morton, M.B., F.R.C.S. Eng. Fourth Edition. London: H. K. Lewis. 1891. Pp. 71.

16. The Harveian Oration. By W. Howship Dickinson, M.D., F.R.C.P. London: Longmans, Green, & Co. 1891. 8vo. Pp. 34.

17. The Action of Glycerine on the Brain. By James Johnstone. Edinburgh: John Lindsay. 1891. Pp. 16.

18. The Anatomical and Histological Dissection of the Human Ear. By Dr. Adam Politzer. Translated from the German by George Stone. London: Baillière, Tindall, & Cox. 1892. 8vo. Pp. 272.

19. Psycho-therapeutics. By C. Lloyd Tuckey, M.D. Third Edition. London: Baillière, Tindall, & Cox. 1891. 8vo. Pp. 321.

20. The Newsagent and Booksellers' Review. Vol. V. No. 22. November 28, 1891.

21. Revista de Ciencias Médicas de Barcelona. Año XVIII. Número 22, 1891.

22. The Pharmaceutical Journal of Australasia. Vol. IV. No. 10. October, 1891.

23. Bulletins et Mémoires de la Société de Chirurgie de Paris. Tome XVII. No. 9. Octobre, 1891. Paris: G. Masson.

24. Statement of Mortality in the Principal Cities of Canada for the Month of October, 1891.

25. The National Bulletin. Nos. 56, 57. December, 1891.

26. On the Simulation of Hysteria by Organic Disease of the Nervous System. By Thomas Buzzard, M.D. Lond. London: J. & A. Churchill. 1891. 8vo. Pp. 113.

27. Age of the Domestic Animals. By Rush Shippen Huidekoper, M.D. Philadelphia and London: F. A. Davis. 1891. 8vo. Pp. 217.

Books, Pamphlets, and Periodicals received—(continued).

28. The Pathological Histology of Bronchial Affections, Pneumonia, and Fibroid Pneumonia. By A. G. Auld, M.D. London: J. & A. Churchill. 1891. 8vo. Pp. 207.

29. The Medical Bulletin. Vol. XIII. No. 11. November, 1891.

30. The Pathology and Prevention of Influenza. By Julius Althaus, M.D., M.R.C.P. Lond. London: Longmans & Co. 1892. Pp. 64.

31. L'Ittiolo nella terapia dei morbi utero-ovarici. Del Dr. Albertoletti. Seduta del 12 guigno, 1891. Reprint. Pp. 12.

32. Beitrag zur Freund'schen Ichthyolbehandlung der Frauenkrankheiten. Von Dr. Edgar Kurz. Leipzig: Georg Thieme. 1891. Pp. 7.

33. Zur Ichthyolbehandlung in der Frauenheilkunde. Von P. J. Kötschau. 1891. Reprint. Pp. 10.

34. Johns Hopkins University Circulars. Vol. XI. No. 93. Baltimore. November, 1891.

35. The Johns Hopkins Hospital Reports. Vol. II. Nos. 7, 8, 9. Report in Pathology. I. Amœbic Dysentery. Baltimore. December, 1891.

36. Surgical Diseases of the Ovaries and Fallopian Tubes, including Tubal Pregnancy. By J. Bland Sutton, F.R.C.S. London: Cassell & Co. 1891. 8vo. Pp. 500.

37. Archives of Pediatrics. Vol. VIII. December, 1891. Philadelphia: J. B. Lippincott Company.

38. A Code of Rules for the Prevention of Infectious and Contagious Diseases in Schools. Third and Revised Edition. London: J. & A. Churchill. 1891. Pp. 85.

39. Reports of the Medical, Surgical, and Pathological Registrars of the Middlesex Hospital for the year 1890. London: J. & A. Churchill. 1891. 8vo. Pp. 382.

40. Notes on Gynæcological Nursing. By John Benjamin Hellier, M.D. Lond. Dondon: J. & A. Churchill. 1891. Pp. 80.

41. Blätter für klinische Hydrotherapie. I. Jahrgang. Nr. 8. Wien. December, 1891.

42. Abdominal Surgery. By J. Greig Smith, M.A., F.R.S.E. Fourth Edition. London: J. & A. Churchill. 1891. 8vo. Pp. 806.

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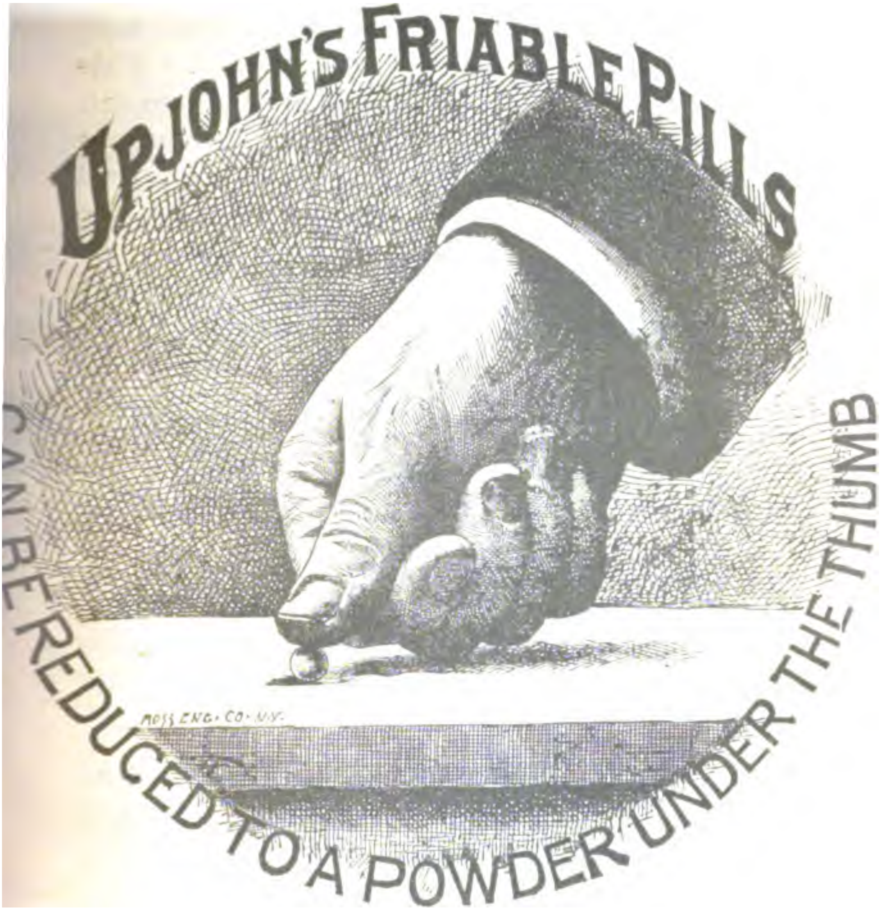
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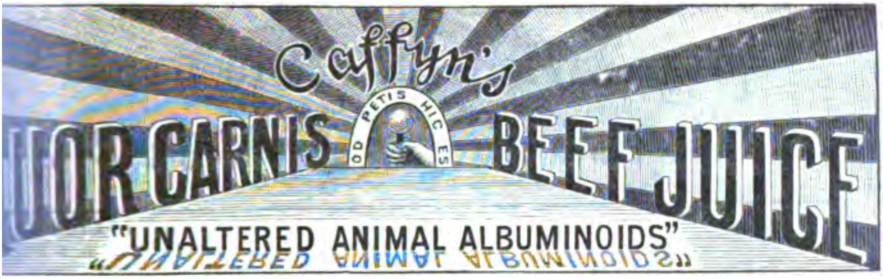

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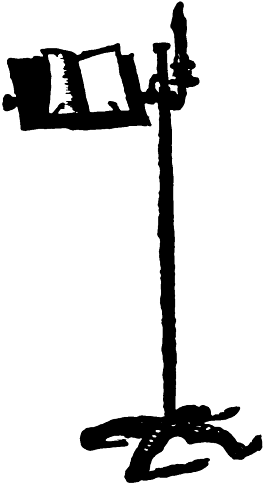

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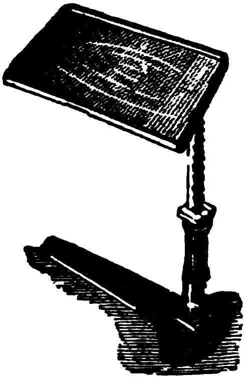

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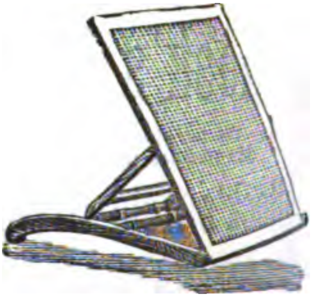

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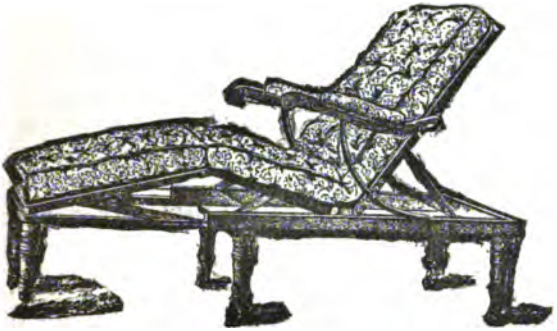

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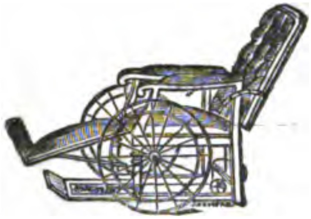

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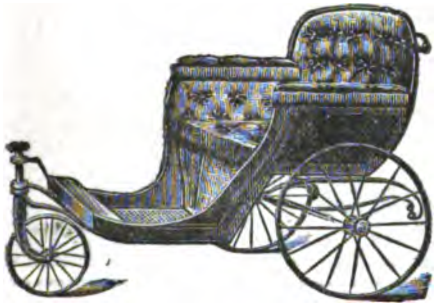

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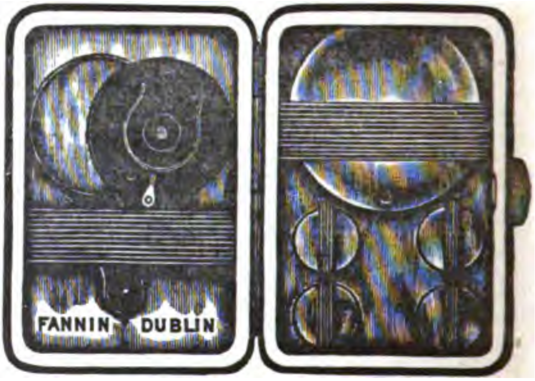

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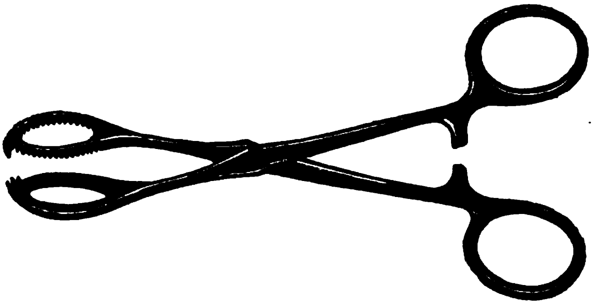

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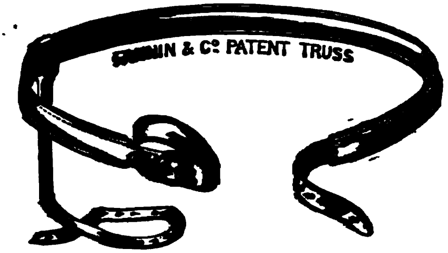

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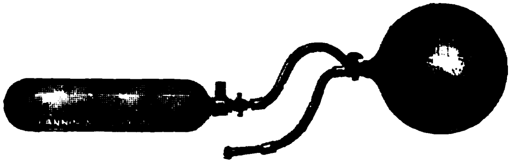

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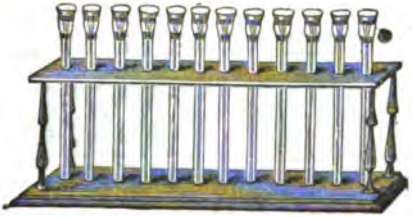

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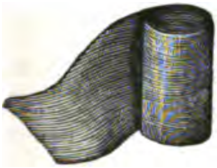

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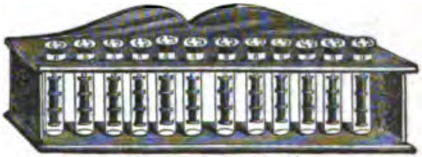

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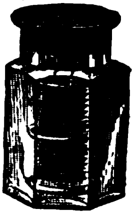

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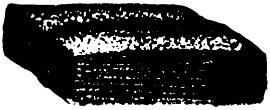

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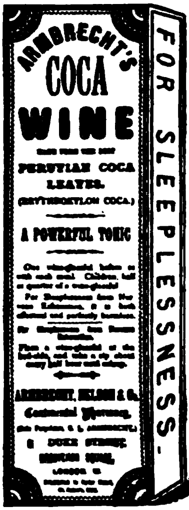

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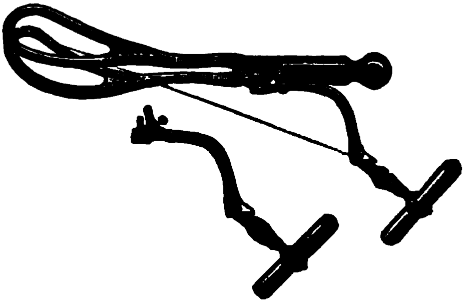

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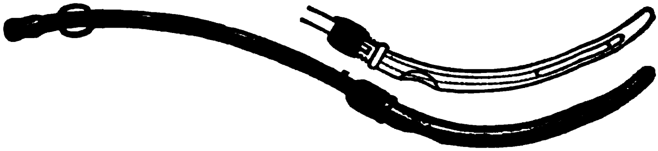

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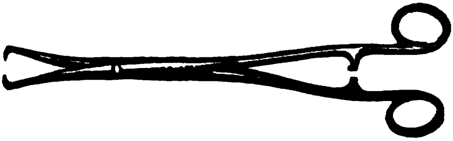

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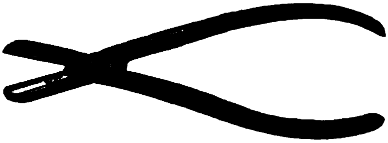

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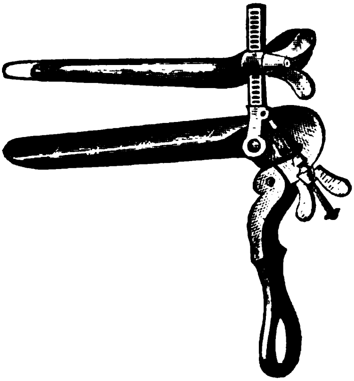

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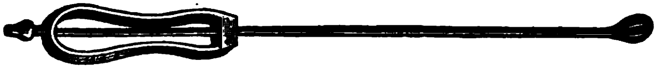

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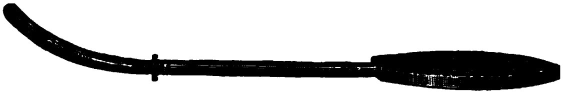

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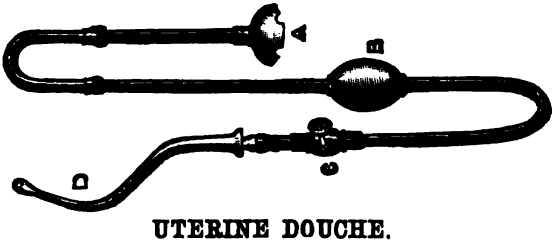

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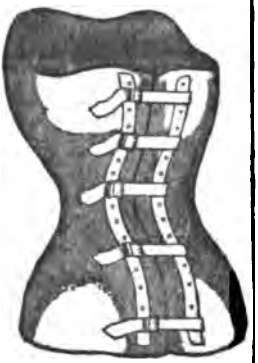


Instructions for Measurement, &c.

JACKET *(in cases of slight deformity).*

Circumference at axilla.
" waist.
" hips.
Length from axilla to great trochanter.

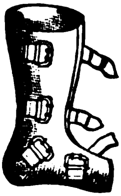
In severe angular cases circumference over apex of curve, position of same, and contour should be given; in lateral cases a description of the case.

In all cases it should be stated if for male or female.

CERVICAL JACKET.

Same measurements required, and circumference at neck, and length from neck to axilla.

Any part of the Jacket can in the process of Manufacture be left Soft.



CLUB FOOT.

Circumference below knee.
" ankle.
" heel and instep.
Length from below knee to ground.
" of foot.

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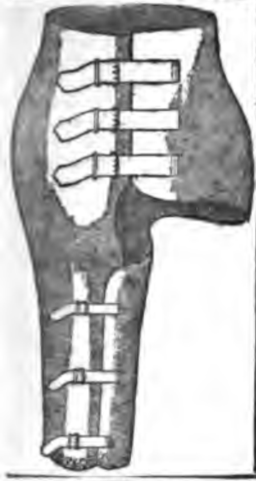
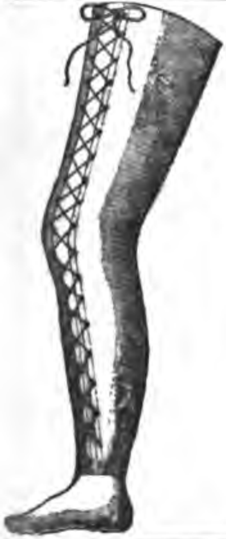


Instructions for Measurement, &c.

HIP SPLINT.

Circumference at waist.
" hips.
" thigh, top of
" above knee.
Length from waist to groin.

State if for right or left side.



LEG SPLINT.

Circumference at top of thigh.
" above knee.
" at knee.
" below knee.
" calf.
" ankle.
Length from groin to centre of knee.
" centre of knee to ankle.

State if for right or left leg.

When the foot-part is required, also circumference of heel and instep, and length from centre of knee to ground.

If the limb is contracted the contour should be given.

Splints are also made in Poroplastic for fracture of Inferior Maxilla, Humerus Elbow-Joint, Forearm, Thigh, Knee-Joint, Leg, Shoulder-Joint, Hand, &c.

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Extract from "The British Medical Journal," Sept. 26, 1891.

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Extract from "CHEMIST & DRUGGIST," August 8th, 1891.

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1. On Harelip and Cleft Palate. By William Rose, M.B., B.S. Lond. London: H. K. Lewis. 1891. 8vo. Pp. 172.

2. The New York Journal of Gynæcology and Obstetrics. December, 1891. Vol. I. No. 2. New York: Fairchild & Co.

3. Ophthalmic Notes. By A. Vernon Ford, M.R.C.S. Eng. London: Baillière, Tindall, & Cox. 1891. 8vo. Pp. 107.

4. Indigestion. By Thomas Dutton, M.D. Univ. Durh. London: Henry Kimpton. 1892. 8vo. Pp. 143.

5. A Treatise on Diseases of the Lungs and Pleura. By the late Wilson Fox, M.D., F.R.S. Edited by Sydney Coupland, M.D., F.R.C.P. London: J. & A. Churchill. 1891. 8vo. Pp. 1200.

6. Boletin medico de Puebla. Primer Año. Núm. 5. Noviembre 20 de 1891. Puebla: Benjamin Lara.

7. On Certain Arrangements made in the City of Glasgow in 1866, with a view to the Prevention of Epidemic Cholera. By W. T. Gairdner, M.D., LL.D. Reprint 1891. Pp. 19.

8. Bulletin of the Johns Hopkins Hospital. Volume II. No. 18. Baltimore. November, 1891.

9. World Wide Missions. December, 1891. Vol. IV. No. 5.

10. A Study of Experimental Pneumonitis in the Rabbit. By T. Mitchell Prudden, M.D. New York: D. Appleton & Co. 1891. Reprint. Pp. 18.

11. Statement of Mortality in the Principal Cities of Canada for the Month of November, 1891.

12. Atlas of Clinical Medicine. By Byrom Bramwell, M.D., F.R.C.P. Edin. Vol. I. Part III. Edinburgh: T. & A. Constable.

13. A Treatise on the Ligation of the Great Arteries in Continuity. By Charles A. Ballance, M.B., M.S. Lond.; and Walter Edmunds, M.A., M.C. Cantab. London: Macmillan & Co. 1891. 8vo. Pp. 568.

14. A Dictionary of Treatment, or Therapeutic Index. By William Whitla, M.D. London: Henry Renshaw. 1892. 8vo. Pp. 948.

15. Archives of Surgery. By Jonathan Hutchinson, LL.D., F.R.S. Vol. III. No. 11. January, 1892.

16. Revue Général de Médecine, de Chirurgie, et d'Obstétrique. Première Année. Nos. 1, 2 et 3. Janvier, 1892. Paris: O. Doin.

17. The Nursing Record. No. 197. Vol. VIII. January 7, 1892.

18. The Medical Bulletin. Vol. XIII. No. 12. December, 1891.

19. Les Nouveaux Remèdes. Huitième Année. No. 1. Paris: Octave Doin.

20. Revue internationale de Rhinologie, Otologie, Laryngologie, et Ophtalmologie. Première Année. No. 1. 20 Decembre, 1891. No. 3. 20 Janvier, 1892. Paris.

21. A Hint to the Literary Men of the Profession. By Charles Perry Fisher. Reprint. December, 1891. Pp. 4. Philadelphia.

22. The Atmospheric Tractor and the Uterine Safety Tube. By P. M'Gahey, M.D., of Philadelphia. Reprint. November, 1891. Philadelphia: James T. O'Callahan. Pp. 14. 1891.

23. The Treatment of Typhoid Fever. By James Barr, M.D., Physician to the Northern Hospital, Liverpool. London: H. K. Lewis. 1892. 8vo. Pp. 212.

24. The National Bulletin. Nos. 60, 61, 62, 63. January, 1892.

25. The Journal of the British Dental Association. Vol. XIII. No. 1. January 15, 1892. London: Baillière, Tindall & Cox.

26. On the Medical and Surgical Uses of Electricity. By Geo. M. Beard, A.M., M.D.; and A. D. Rockwell, A.M., M.D. Eighth Edition. London: H. K. Lewis. 1891. 8vo. Pp. 788.

27. A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M.D. Seventh Edition. London: H. K. Lewis. 1890. 8vo. Pp. 900.

28. The Pathology of Mediastinal Tumours with special reference to Diagnosis. By John Lindsay Steven, M.D. London: H. K. Lewis. 1892. 8vo. Pp. 109.

29. Massage and the Original Swedish Movements. By Kurre W. Ostrom. Second Edition. London: H. K. Lewis. 1892. 8vo. Pp. 143.

30. Lectures on Pathology. By the late Henry Gawen Sutton, M.B., F.R.C.P. Edited by Maurice Eden Paul, M.D., and revised by Samuel Wilks, M.D., LL.D., F.R.S. London: J. & A. Churchill. 1891. 8vo. Pp. 503.

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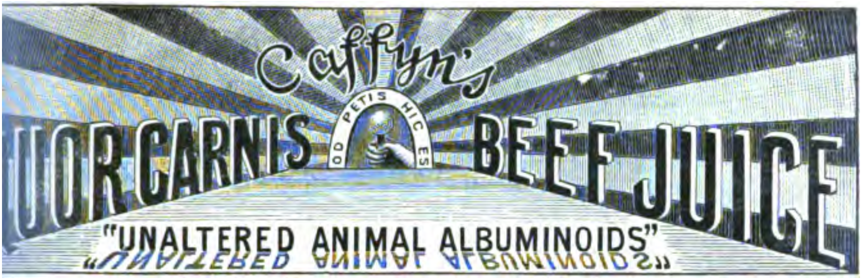

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ENQUIRE INTO THEIR HABITS

and mode of life, what do we find? Many are in service or in shops, shut up often for hours together in close, stuffy rooms; others in a town, leading an artificial life with balls, parties, etc., late to bed and late to rise —all have little healthy outdoor exercise, and all are sadly too fond of tea, cakes, and other confectionery. They pore for hours over novels and sickly sentimental stories, becoming weaker and weaker, until at last their friends take notice of their condition, and the tedious work of repair has to be commenced. The poor girl has to take her doses of iron, or it may be two or three Blaud's Pills, three times a day, and very often beef-tea also is ordered. Now, I daresay many persons, like the writer, do not like beef-tea, and it will be

A BLESSING TO THEM

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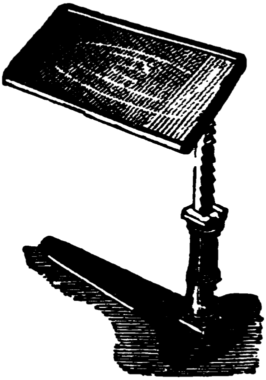

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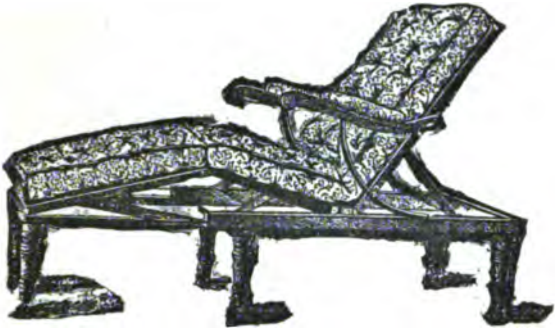

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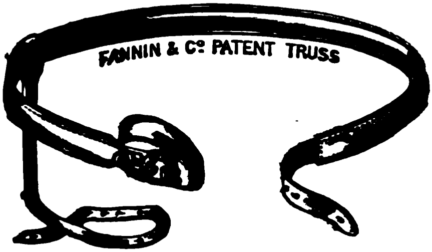

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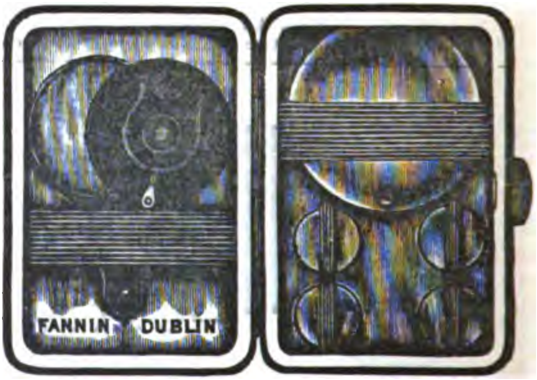

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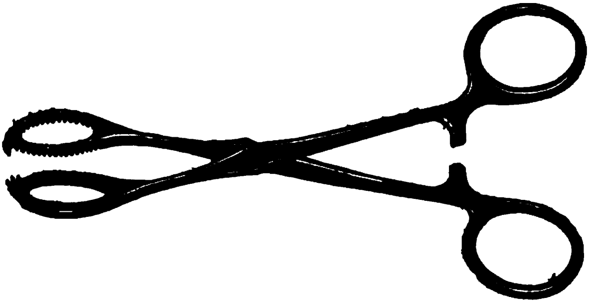

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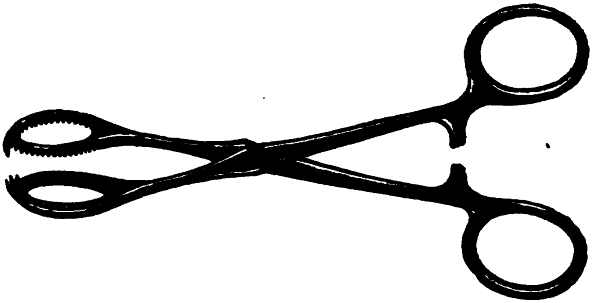

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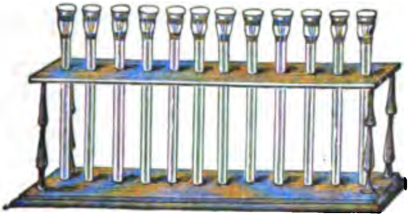

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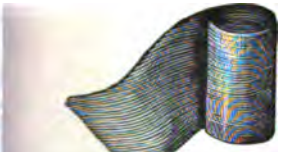

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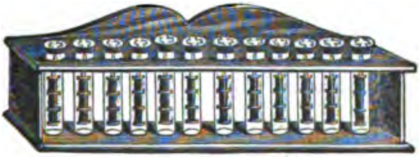

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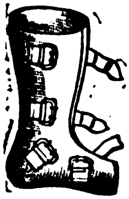

CLUB FOOT.

Circumference below knee.
„ ankle.
„ heel and instep.
Length from below knee to ground.
„ of foot.

SOLE AGENTS FOR DUBLIN—**FANNIN & CO.,**

Manufacturers of Surgical Instruments & Appliances, Medical Booksellers & Publishers

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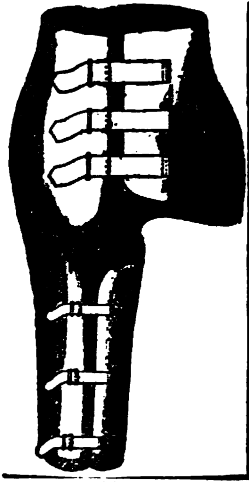
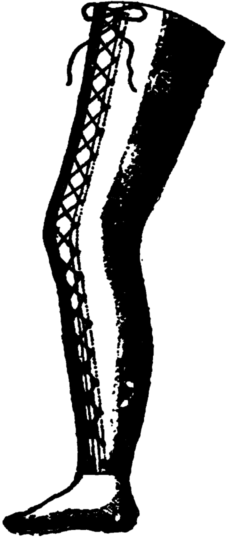


Instructions for Measurement, &c.

HIP SPLINT.

Circumference at waist.
" hips.
" thigh, top of
" above knee.
Length from waist to groin.

State if for right or left side.



LEG SPLINT.

Circumference at top of thigh.
" above knee.
" at knee.
" below knee.
" calf.
" ankle.
Length from groin to centre of knee.
" centre of knee to ankle.

State if for right or left leg.

When the foot-part is required, also circumference of heel and instep, and length from centre of knee to ground.

If the limb is contracted the contour should be given.

Splints are also made in Poroplastic for fracture of Inferior Maxilla, Humerus Elbow-Joint, Forearm, Thigh, Knee-Joint, Leg, Shoulder-Joint, Hand, &c.

These Splints can be fitted perfectly to the Patient if softened either by hot water or in a Heater made for the purpose. When mounted with webbing, hot water will do; if with leather, a Heater should be used. The material becomes quite hard again in two or three minutes.

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Extract from "The British Medical Journal," Sept. 26, 1891.

SOLUBLE PEARL-COATED PILLS.

PEARL-COATED PILLS are very elegant in appearance and are readily taken by patients. The objection to their use is that sometimes the coating is so hard that the pills pass through the intestinal canal unchanged. Mr. Stephen Wand, of Leicester, has sent for examination specimens of some of his soluble pearl-coated pills. We find that when they are placed in water at a temperature of 100° F. and kept perfectly still, in the course of an hour the coating has become cracked and the water coloured, thus showing that the contents have become dissolved. If during the experiment the pills are shaken, the disintegration can be effected in a much shorter time. The addition of a little dilute hydrochloric acid greatly facilitates the operation. From these results it may be concluded that the pearl-coated pills sent by Mr. Stephen Wand would, under the conditions existing in the stomach, rapidly become broken up and their contents dissolved.

Extract from "CHEMIST & DRUGGIST," August 8th, 1891.

COATED PILLS.—We have received from Mr. Wand, of Leicester, samples of his soluble pearl-coated pills. They are very nicely made and finished, the coating being even, bright, and hard, yet we find that in cold water only the coating disintegrates in a very short time, and the mass underneath is also rapidly affected by the fluid. We take it from our experiments that the pills are perfectly soluble in the alimentary canal, and as far as we are able to judge the masses are made with excellent materials. The Blaud's pill, for instance, shows no signs of oxidation. Mr. Wand has nearly 1,300 formulæ, and offers ten-gross lots of the more popular pills at very low prices.

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Ext. Coloc. Co.	" ij.	
" Hyoscy.	" i.	1s. 1d.
FEMALE.		
688 Ferri Sulp. Ex.	gr. 1 & 1-3rd.	
Aloes Soc.	" 1-3rd.	
Canella	" 2-3rds.	
Ol. Pulegii	♏ 1-3rd.	
Terebinth	q.s.	5d.

		Per gro
TONIC.		
109 Pil. Ferri (Blaud)	gr. 4 and 5	4½
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" Gum. Ammon.	aa. gr. iss.	
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BOOKS, PAMPHLETS, AND PERIODICALS RECEIVED—MARCH, 1892.

1. The Year-Book of Treatment for 1892. London: Cassell & Co. 1892. 8vo. Pp. 486.

2. Influenza and the Laws of England concerning Infectious Diseases. By Richard Sisley, M.D. Lond. London: Longmans, Green, & Co. 1892.

3. Revue Général de Médecine, de Chirurgie, et d'Obstétrique. Première Année. Nos. 4, 5. 1892. Paris: O. Doin.

4. The Temperature in Acute Primary Pneumonia of Children. The Diagnosis of Acute Broncho-Pneumonia from Bronchitis. By S. Emmett Holt, M.D., New York. December, 1891. Reprint. Pp. 22.

5. The Post-Graduate. New Series. Vol. VII., No. 2. January, 1892. New York.

6. Blätter für klinische Hydrotherapie. II. Jahrgang. Nr. 1 und Nr. 2. Wien. Jänner und Februar, 1892.

7. Statement of Mortality in the Principal Cities of Canada for the Month of December, 1891.

8. Bath and her Thermal Waters. By Samuel Craddock, M.R.C.S. Bath. 1889. Pp. 76.

9. The Review. February 3, 1892. Vol. XXIII., No. 1020.

10. Journal of the Leprosy Investigation Committee. No. 4. December, 1891. London: Macmillan & Co.

11. The Chinese. By Robert Coltman, Jr., M.D. Philadelphia and London: F. A. Davis. 1891. 8vo. Pp. 212.

12. Tuberculosis and its Successful Treatment. By Robert Bell, M.D. Glasgow: David Bryce & Son. 1892. Pp. 60.

13. Deafness and Discharge from the Ear. By Samuel Sexton, M.D., assisted by Alexander Duane, M.D. New York: J. H. Vail & Co. 1891. 8vo. Pp. 89.

14. A Practical Treatise on Diseases of the Skin. By Henry G. Piffard, A.M., M.D., assisted by Robert M. Fuller, M.D. London: H. K. Lewis. 1891. Pp. 159.

15. Tubal and Peritoneal Tuberculosis. By George M. Edebohls, A.M., M.D. Philadelphia: Wm. J. Dornan. 1891. Reprint. Pp. 23.

16. The Pharmaceutical Journal of Australasia. Vol. IV. Nos. 11 and 12. November 25 and December 25, 1891.

17. Ueber Cholera Infantum aestiva. Von Dr. Meinert in Dresden. Reprint. 1891.

18. Ueber die Behandlung der Cholera nostras (Erwachsener) mit Zufuhr grosser Mengen Wassers. Von Dr. K. Fiedler in Valparaiso. Reprint. 1891.

19. Royal University of Ireland. The Calendar for the Year 1892. Dublin: Alex. Thom & Co. 1892. 8vo. Pp. 389.

20. Journal of the Scottish Meteorological Society. Third Series. No. 8. Edinburgh and London: William Blackwood & Sons. 1891.

21. Boletin medico de Puebla. Primer Año. Núm. 6. Enero primo de 1892. Puebla: Benjamin Lara.

22. Considérations pathogéniques sur l'Hémospermie d'origine non inflammatoire. Par le Dr. R. Jamin. Paris: Chamerot et Renouard. 1891. Reprint. Pp. 15. [Duplicate copies.]

23. Présence du phosphate d'alumine dans l'urine. Par le Dr. R. Jamin et M. Alexander Girard. Reprints. Pp. 2. 1891.

24. Report of the Library of the Bristol Medico-Chirurgical Society. Pp. 4. 1891.

25. Archives of Pediatrics. Vol. IX., No. 98. February, 1892. New York: Fairchild & Co.

26. Annales de la Policlinique de Bordeaux. T. II., Fasc. 3, No. 7. Janvier, 1892. Bordeaux: Feret et Fils.

27. The Medical Bulletin. Vol. XIV., No. 1. January, 1892. Philadelphia, U.S.A.: F. A. Davis & Co.

28. Mémoires couronnées et autres Mémoires publiés par l'Academie Royale de Médecine de Belgique. Tome X., Cinquième Fascicule. Tome XI., Premier Fascicule. Bruxelles: F. Hayez. 1892. 8vo.

30. Bulletin trimestriel des Publications Nouvelles de la Librairie Félix Alcan. No. 79. Février, 1892. Paris. Pp. 16.

31. A Treatise on Diseases of the Nose and its accessory Cavities. By Greville MacDonald, M.D. Lond. Second Edition. London: Alexander P. Watt. 1892. 8vo. Pp. 381.

32. Braithwaithe's Retrospect of Medicine. Vols. CI.-CIV. 1890 and 1891. London: Simpkin & Co.

33. Twelfth Annual Report of the Local Government Board, 1890-91. London: Eyre & Spottiswoode. 1891. 8vo. Pp. xxi. + 296.

34. The Tocsin. March, 1892. Vol. IV. No. 30.

35. The Pharmaceutical Journal of Australasia. Vol. V., No. 1. January 25, 1892. [Duplicate copies.]

36. Concerning the Kinsmen and Friends of Insane Patients. By Frank Ashby Elkins, M.B. Reprint. Pp. 7. Edinburgh.

37. Fourteenth Annual Report of the Presbyterian Eye, Ear, and Throat Charity Hospital, Baltimore, for 189 Baltimore: Guggenheimer, Weil & Co 1892. Pp. 16.

38. The Journal of the British Denta Association. Vol. XIII. No. 3. March 15, 1892. London: Baillière, Tindall & Cox.

39. Reasons why the office of Coroner should be held by a Member of the Medical Profession. By Frederick W. Lowndes, M.R.C.S. Eng. London: J. & A. Churchill. 1892. Pp. 34.

40. Bacteriological Diagnosis. By James Eisenberg, Ph.D., Vienna. Translated by Norval H. Pierce, M.D. Philadelphia and London: F. A. Davis & C 1892. Pp. 184.

41. The Post-Graduate. Vol. VII, No. 4. New Series. March, 1892. New York.

42. Hypnotism: simplified and explained. By Joseph Darby. London Simpkin, Marshall, Hamilton, Kent, & Co. 1892. Pp. 55.

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"**Caffyn's Malto-Carnis** consists of two-thirds (66%) of Caffyn's Liquor Carnis, 'uncooked juice of beef,' in combination with Extract of Malt and Cocoa. Dyspeptic persons who have been recommended to eschew tea would do well to give Caffyn's Malto-Carnis a trial, and in other and similar diseased conditions, the preparation will doubtless prove useful."—*The Medical Press.*

The Lancet, *Aug. 29th, 1891*, —"From the presence of uncooked juice of beef, and consequently meat albumen, it turns semi-solid on heating, and the cold filtered extract rapidly digests starch, while the presence of cocoa is evident to the taste. Analysis showed—mineral matter, 2·50 per cent. (rich in soluble phosphates); total solid matter, dried at 100° C., 66·28 per cent. Nutritious and stimulating elements like these are rarely found combined in so satisfactory a manner as in this new and interesting preparation of The Liquor Carnis Company."

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Sir,—We hasten to inform you, that at the suggestion of a great many Hospital Secretaries, and other gentlemen, we have commenced putting up Caffyn's Liquor Carnis and Malto-Carnis in larger sizes for Benevolent Institutions, which enables us to charge a much lower rate for supplies.

Imperial pints, Liquor Carnis (Caffyn), we now supply at 77/- per dozen, and glass jars containing over a pound weight of Malto-Carnis (Caffyn) at 53/- per dozen.

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Yours, &c.,

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Managing Director.

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LACTOPEPTINE contains the five active agents of digestion, combined in the same proportion as they exist in the human stomach, and will digest food in a manner identical to that obtained under the influence of the natural gastric juice.
LACTOPEPTINE will be found far superior to all other remedies in Indigestion, Dyspepsia, and kindred diseases.
Also, particularly indicated in Anemia, General Debility, Chronic Diarrhœa, Constipation, Headache, Vomiting and Nausea in Pregnancy, and impoverished condition of the blood.
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It is conclusively ascertained that LACTOPEPTINE will bring about the Digestion of Food in a manner perfectly identical to that obtained under the influence of the natural gastric juice.

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From "RETROSPECT OF PRACTICAL MEDICINE AND SURGERY," *July*, 1877.

"A glance at the formula of **LACTOPEPTINE** would convince even the most sceptical of the valuable results that must ensue through its administration. It is a combination of all the digestive agents, consequently can never be administered without giving the utmost satisfaction.

Extract from Certificate of Composition and Properties, by

Professor ATTFIELD, Ph.D.,

Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain.

LONDON, *May 3rd*, 1881.

I now report that the almost inodorous and tasteless pulverulent substance termed Lactopeptine is a mixture of the three chief agents which enable ourselves and all animals to digest food. That is to say, Lactopeptine is a skilfully-prepared combination of meat-converting, fat-converting, and starch-converting materials, acidified with those small proportions of the acids that are always present in the healthy stomach; all being disseminated in an appropriate vehicle, namely, powdered sugar of milk. The acids used at the factory—lactic and hydrochloric—are the best to be met with, and are perfectly combined to form a permanent preparation; the milk sugar is absolutely pure; the powder known as "diastase," or starch-digesting (bread, potato, and pastry-digesting) material, as well as the "pancreatin," or fat-digesting ingredient, are as good as any I can prepare, while the pepsin is much superior to that ordinarily used in medicine. Indeed, as regards this chief ingredient,—pepsin—I have only met with one European or American specimen equal to that made and used by the Manufacturer of Lactopeptine. A perfectly parallel series of experiments showed that any given weight of acidified pepsin alone at first acts somewhat more rapidly than Lactopeptine containing the same weight of the same pepsin. Sooner or later, however, the action of the Lactopeptine overtakes and outstrips that of pepsin alone—due, no doubt, to the meat-digesting, as well as fat-digesting, power of the pancreatin contained in the Lactopeptine. My conclusion is that Lactopeptine is a most valuable digesting agent, and superior to pepsin alone. JOHN ATTFIELD.

One of the chief features of **LACTOPEPTINE** (and the one which must gain it a preference over all digestive preparations) is, that it *precisely represents in composition* the *natural digestive juices* of the stomach, *pancreas*, and *salivary glands*, and will therefore readily dissolve all foods necessary to the recuperation of the human organism.

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NOTE.—A 64-page pamphlet and Sample of Lactopeptine sent to the Medical Profession, on request.

BOTTLE BABIES.

It is a sad fact, but, nevertheless, a true one, that the number of bottle-fed babies is on the increase. In the upper classes the calls of society prevent mothers from feeding their own children, whilst in the poorer ranks the constant struggle for life often makes the women unable to do so even when they wish it. This state of affairs is, in the majority of cases, most disastrous to the infants, for a mother's milk is the natural food during the first nine months of a baby's life, and it is a food for which it is very hard to find an artificial substitute. Other kinds of milk are employed, and of those

THE MILK OF THE ASS

or the goat most nearly approaches human milk, and may therefore be used without much harm following; but, unfortunately, comparatively few people are able to procure either of these varieties, and are compelled to use cow's milk. Now, the disadvantage of cow's milk is, that when it reaches the stomach it coagulates, forming dense indigestible curds. The result is that the poor child gets a bad stomach-ache, and usually vomits the offending mass, together with the remainder of its meal. It gets fretful, is always crying, and above all it gets weak, and in time gets rickets, and probably grows up with bowed legs,

A CROOKED SPINE

liable to convulsions, and various other ailments. In order to prevent this curdling, or to digest the curds when formed, various substances may be added to the milk in the bottle, one of the best of which is †Caffyn's Liquor Carnis. The clot formed when it is used is light and very easily digested, whilst it is also a most excellent preparation for building up bone and muscle, and thus preventing rickets. If the infant is under six months old, twenty drops of †Caffyn's Liquor Carnis should be added to the bottle each time it is filled; for children over six months and under two years old give from half a teaspoonful in their milk three times a day.

† Caffyn's Liquor Carnis (Beef Juice).—"A nourishing fluid, consisting of Uncooked Juice of Meat or Muscle-plasma, permanently preserved by the addition of a definite quantity of a Carbohydrate. A valuable food and tonic for infants and invalids."—*The British Medical Journal.*

NOTE.—Caffyn's Liquor Carnis, Malto-Carnis, and Allied Products of Raw-Beef-Juice are prepared from British Beef only—in London—at the Laboratories of the Liquor Carnis Co. in Farringdon-st.—Smithfield Works—close to Smithfield Market.

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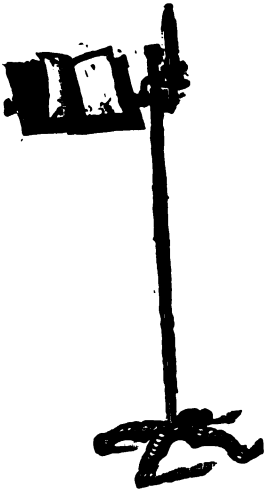

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Brass Column and Bronzed Stand.

Polished Walnut Desk - -	£1	1	0
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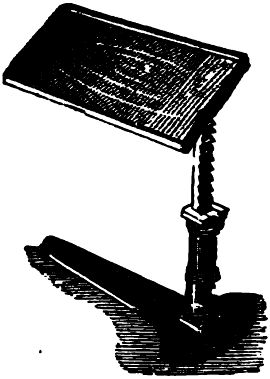

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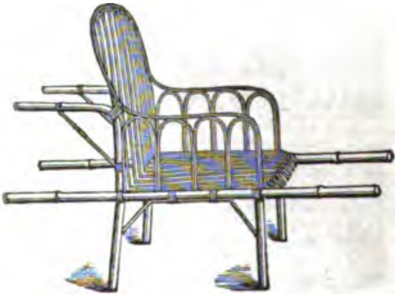

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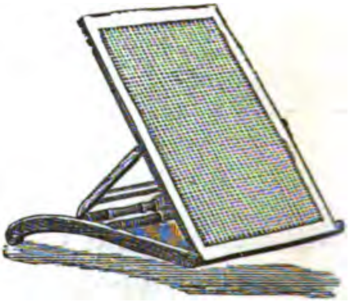

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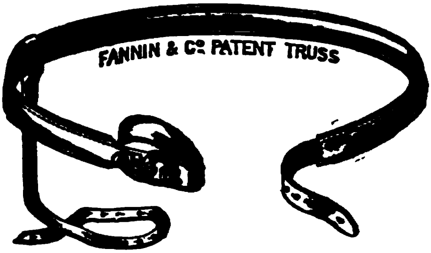

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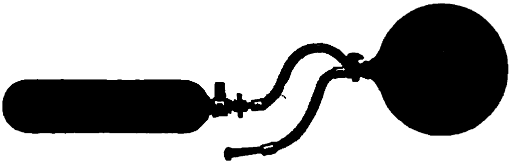

Apparatus for the inhalation of oxygen gas, as suggested by Dr. Foy.

Price 10s. 6d., post free.

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The Oxygen Gas is supplied in cylinders containing 10, 20, and 40 cubic feet, at the rate of 4*d.* and 5*d.* per cubic foot, according to the quantity required. For cases in the country, where a supply cannot be obtained at a moment's notice, FANNIN & Co. recommend that the larger cylinders should be ordered in the first instance. These cylinders are kept in stock, ready for immediate despatch on receipt of a letter or telegram.

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CAUTION.—No oil or grease must on any account be used for the screws or fittings of the cylinders.

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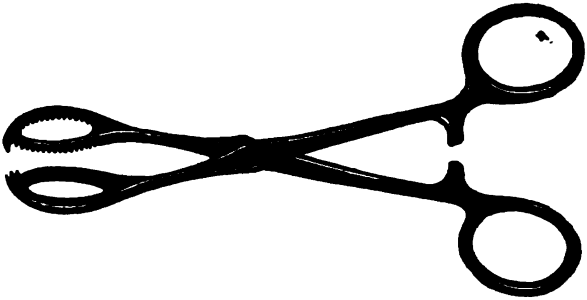

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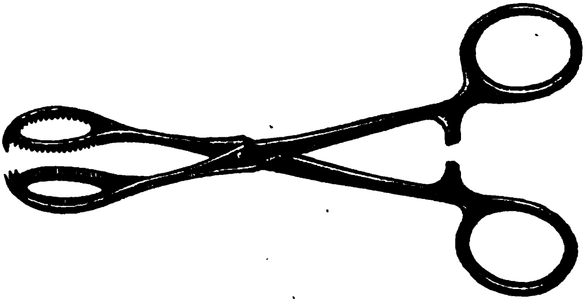

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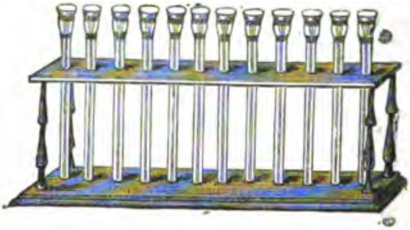

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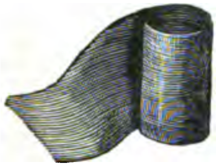

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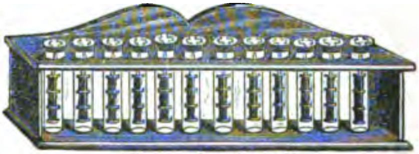

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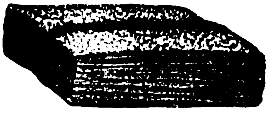

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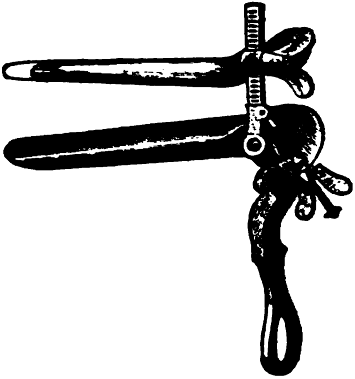

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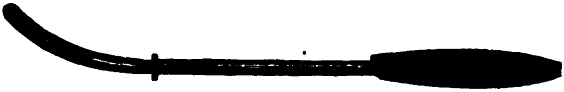

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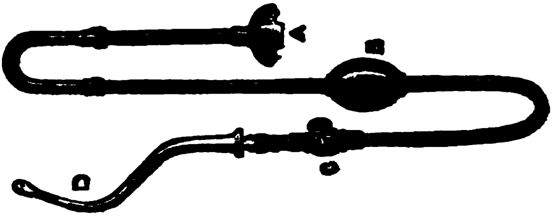

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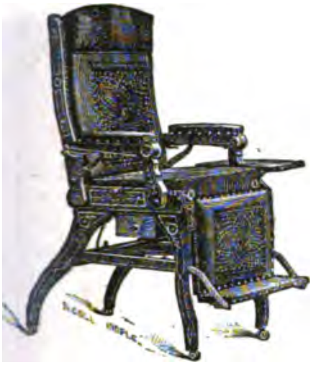

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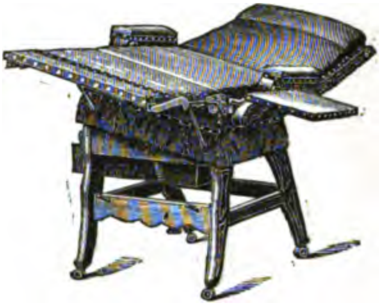

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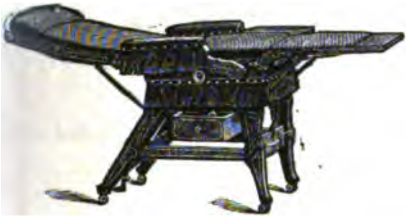

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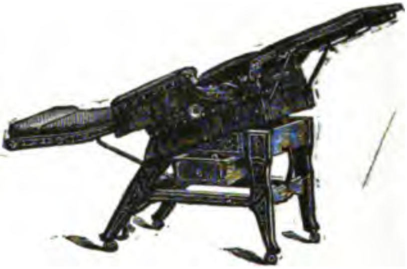

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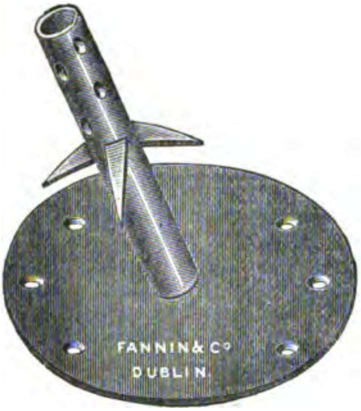

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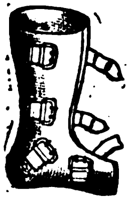

CLUB FOOT.

Circumference below knee.
„ ankle.
„ heel and instep.
Length from below knee to ground.
„ of foot.

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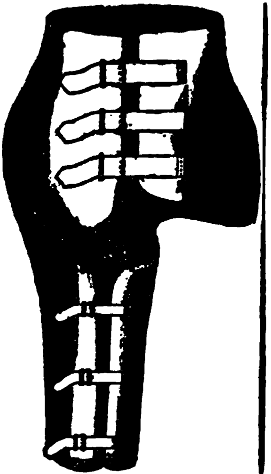
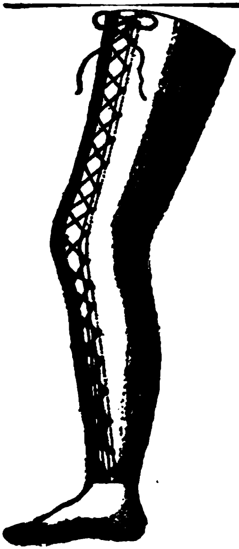


Instructions for Measurement, &c.

HIP SPLINT.

Circumference at waist.
" hips.
" thigh, top of
" above knee.
Length from waist to groin.

State if for right or left side.



LEG SPLINT.

Circumference at top of thigh.
" above knee.
" at knee.
" below knee.
" calf.
" ankle.
Length from groin to centre of knee.
" centre of knee to ankle.

State if for right or left leg.

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BOOKS, PAMPHLETS, AND PERIODICALS RECEIVED—JUNE, 1892.

1. Epidemics, Plagues, and Fevers: their causes and prevention. By the Hon. Rollo Russell. London: Edward Stanford. 1892. 8vo. Pp. 508.

2. International Clinics. Volume Third. Pp. 372. Volume Fourth. Pp. 382. Edinburgh and London: Young J. Pentland. 1892. 8vo.

3. The Diseases of the Nervous System. By J. A. Ormerod, M.A., M.D. Oxon. London: J. & A. Churchill. 1892. 8vo. Pp. 328.

4. Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. Hale White, M.D., F.R.C.P. London: J. & A. Churchill. 1892. 8vo. Pp. 614.

5. Resection as a Substitute for Primary Amputation. By Thomas H. Manley, M.D., New York City. Danburz, Conn. 1891. Reprint. Pp. 19.

6. Cocaine Analgesia in the treatment of Hæmorrhoids, of Ulcers, Fistulæ, and Fissures in the Ano-rectal Region. By Thomas H. Manley, M.D. Reprint. April, 1892. Pp. 8. St. Louis, Mo.

7. Gastrostomy. By N. Senn, M.D., Ph.D. Chicago. Reprint. 1892. Pp. 15.

8. The Bacteriological World and Modern Medicine. Vol. I. No. 5. March, 1892. Battle Creek, Michigan.

9. Archives of Surgery. By Jonathan Hutchinson, LL.D., F.R.S. Vol. III. No. 12. April, 1892. London: J. & A. Churchill.

10. Bulletin of the Johns Hopkins Hospital. Volume III. Nos. 21 and 22. Baltimore. April, 1892.

11. A Junior Course of Practical Zoology. By A. Milnes Marshall, M.D., F.R.S., assisted by C. Herbert Hurst, Ph.D. Third Edition. London: Smith, Elder, & Co. 1892. 8vo. Pp. 478.

12. Differentiation in Rheumatic Diseases (so-called). By Hugh Lane, L.R.C.P., M.R.C.S. Second Edition. London: J. & A. Churchill. 1892. 8vo. Pp. 121.

13. Diseases of the Eye. By G. E. de Schweinitz, M.D. Philadelphia: W. B. Saunders. 1892. 8vo. Pp. 641.

14. Quain's Elements of Anatomy. Edited by E. A. Schäfer, F.R.S., and G. D. Thane. Vol. II. Part 11. Tenth Edition. London: Longmans, Green, & Co. 1892. 8vo.

15. Two cases of Idioglossia. By W. Hale White, M.D., and C. H. Golding-Bird, F.R.C.S. London: Adlard & Co. 1891. Reprint. Pp. 10.

16. Two cases of Removal of Laminæ for Spinal Fracture. By De Forest Willard, M.D. 1891. Reprint. Pp. 10. Philadelphia.

17. Surgical and Mechanical Treatment of the Deformities following Infantile Spinal Paralysis. By De Forest Willard, M.D., Ph.D. 1891. Reprint. Pp. 8. Philadelphia.

18. An Ephemeris of Materia Medica, Pharmacy, Therapeutics, and Collateral Information. April, 1892. Vol. III., No. 6. Brooklyn, N.Y. 1892.

19. Blätter für klinische Hydrotherapie. II. Jahrgang. Nr. 4 und 5. Wien. April und Mai, 1892.

20. The Journal of the British Dental Association. Vol. XIII. No. 4. April 15, 1892. London: Baillière, Tindall & Cox.

21. The Pharmaceutical Journal of Australasia. Vol. V. No. 3. March 15, 1892. [Duplicate copies.]

22. The Medical Bulletin. Vol. XIV. Nos. 3 and 4. March and April, 1892. Philadelphia, U.S.A.: F. A. Davis & Co.

23. An Introduction to Modern Therapeutics. By T. Lauder Brunton, M.D., D.Sc. Edin., F.R.S. London: Macmillan & Co. 1892. 8vo. Pp. 195.

24. Colotomy. By Herbert W. Allingham, F.R.C.S. London: Baillière, Tindall, & Cox. 1892. 8vo. Pp. 199.

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26. A Manual of the Dental Laboratory. By Charles Hunter. London: Baillière, Tindall, & Cox. 1892. Crown 8vo. Pp. 171.

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28. Transactions of the American Surgical Association. Volume the ninth. Philadelphia: William J. Dornan. 1891. 8vo. Pp. 508.

29. The Student's Handbook of Surgical Operations. By Frederick Treves, F.R.C.S. London: Cassell & Co. 1892. 8vo. Pp. 495.

30. On Gall-stones and their Treatment. By A. W. Mayo Robson, F.R.C.S. London: Cassell & Co. 1892. Crown 8vo. Pp. 285.

31. Atlas of Clinical Medicine. By Byrom Bramwell, M.D., F.R.C.P. Edin., F.R.S. Edin. Vol. I. Part IV. Edinburgh: T. & A. Constable. 1892. Quarto.

32. Notes on New Remedies. New York. April, 1892. No. 11.

33. Derby Borough Asylum. Third Annual Report. 1891. Derby: J. W. Simpson. 1891. 8vo. Pp. 46.

34. Year-book of the Scientific and Learned Societies of Great Britain and Ireland. Ninth Annual Issue. London: Charles Griffin & Co. 1892. 8vo. Pp. 233.

35. Lectures on Diseases of the Digestive Organs. By Dr. C. A. Ewald. Translated by Robert Saundby, M.D. Edin., F.R.C.P. Lond. Vol. II. Lectures on Diseases of the Stomach. London: The New Sydenham Society. 1892. 8vo. Pp. 463.

36. The Wife and Mother. By Albert Westland, M.A., M.D., C.M. London: Charles Griffin & Co. 1892. Royal 8vo. Pp. 282.

37. Lunacy Law. By Daniel Chamier. London: Effingham Wilson & Co. 1892. Pp. 104.

38. Intestinal Anastomosis and Suturing. By Robert Abbe, M.D. New York: Trow. Reprint. 1892. Pp. 23.

39. Cases of Gall-bladder Surgery. By Robert Abbe, M.D. Reprint. New York: D. Appleton & Co. 1892. Pp. 10.

40. A Tooth-plate lodged in the Lower Œsophagus more than a year removed by External Œsophagotomy. By Robert Abbe, M.D. 1892.

41. The Palmist and Chirological Review. May, 1892. London: The Record Press. No. 1. Vol. I.

42. Hippocrates, Galen, and Celsus. A series of Bibliographical Demonstrations. By James Finlayson, M.D. 1892. Reprints. Pp. 24, 36, and 16.

43. The Opening Exercises of the Institute of Hygiene of the University of Pennsylvania. Philadelphia. 1892. Pp. 66.

44. Illustrated Lectures on Nursing and Hygiene. By R. Lawton Roberts, M.D. (Lond.), D.P.H. (Camb.). Second Edition. London: H. K. Lewis. 1892. 8vo. Pp. 213.

45. A Text-book of Morbid Histology for Students and Practitioners. By Rubert Boyce, M.B., M.R.C.S. London: H. K. Lewis. 1892. 8vo. Pp. 477.

46. Influenza. By Julius Althaus, M.D., M.R.C.P. Lond. Second Edition. London: Longmans & Co. 1892. 8vo. Pp. 407.

47. Notes on Pathology. By the late R. E. Carrington, M.D. Lond., F.R.C.P. Edited, revised, and amplified by H. Evelyn Crook, M.D., B.S. Lond., F.R.C.S., and Guy Mackeson. London: H. K. Lewis. 1892. 8vo. Pp. 150.

48. The Disinfection of Scarlet Fever and other Infectious Diseases by Antiseptic Inunction. By J. Brendon Curgenven, M.R.C.S., L.S.A. London: H. K. Lewis. 1891. Pp. 25.

50. Guide to the Administration of Anæsthetics. By Henry Davis, M.R.C.S. London: H. K. Lewis. Second Edition. 1892. Pp. 92.

51. Hygiene. Vol. V. No. 53. May. 1892. London: Beaumont & Co.

52. International Medical Magazine. Vol. I. No. 3. April, 1892. Philadelphia: J. B. Lippincott Co.

53. Revue Général de Médecine, de Chirurgie, et d'Obstétrique. Première Année. Nos. 18, 19, 20, 21. 1892. Paris: O. Doin.

54. Studies upon Injuries of the Kidney, Nephrolithotomy, and Nephrorraphy. By Aug. Schachner, M.D. Reprint. 1892. Pp. 70.

55. Archives Cliniques de Bordeaux. Première Année. No. 4. Avril, 1892. Bordeaux: Feret et Fils.

56. Traitement de l'hypertrophie des Amygdales. Par le Dr. E. J. Moure. Paris: Octave Doin. 1892. Pp. 24.

57. Mémoires couronnés et autres Mémoires publiés par l'Académie Royale de Médecine de Belgique. Tome XI. Deuxième Fascicule. Bruxelles: F. Hayez. 1892.

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AN EXCESS OF GLUCOSE

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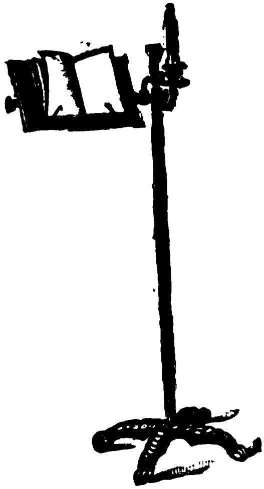

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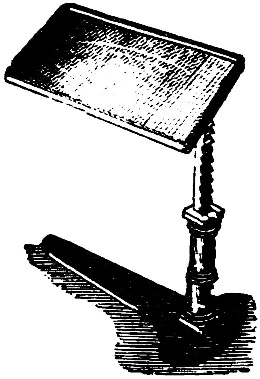

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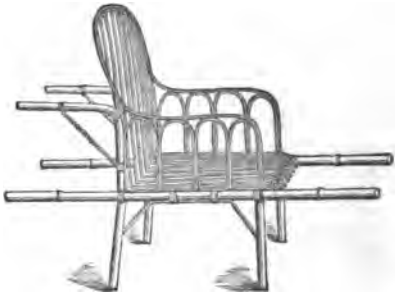

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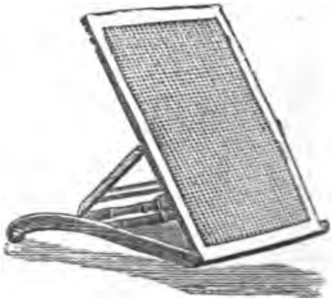

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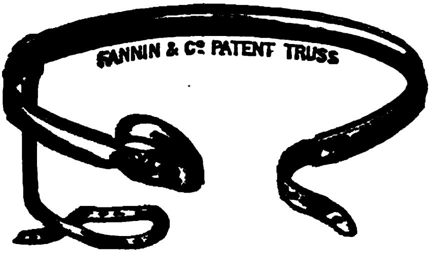

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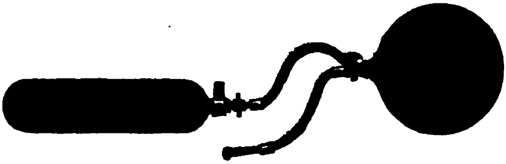

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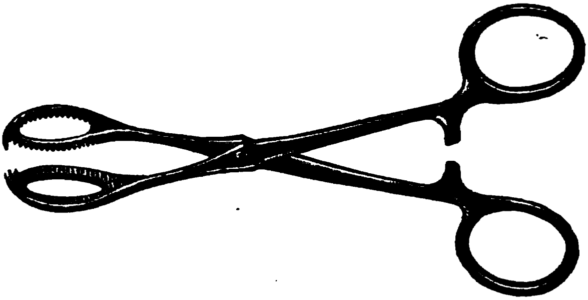

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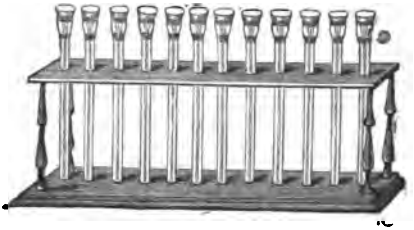

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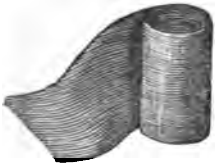

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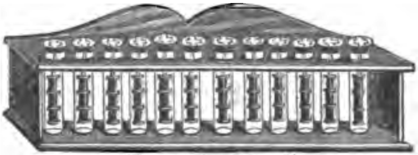

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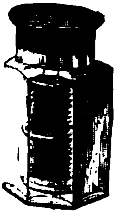

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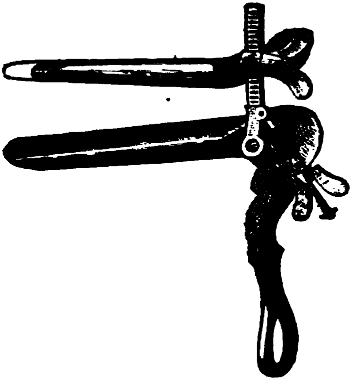

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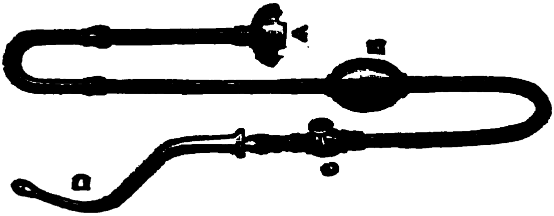

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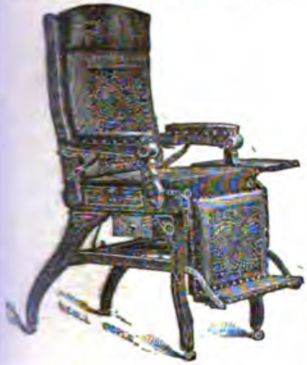

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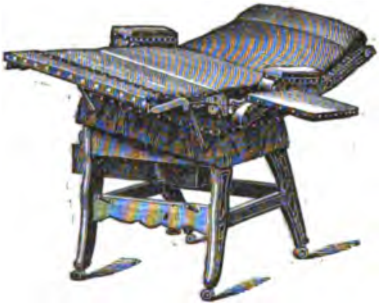

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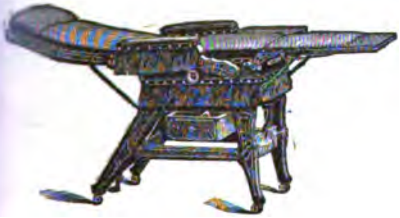

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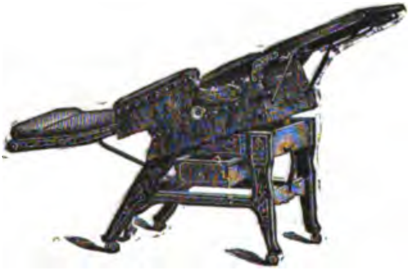

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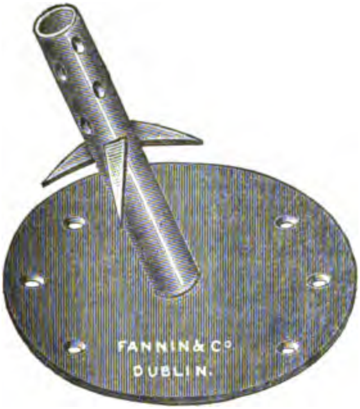

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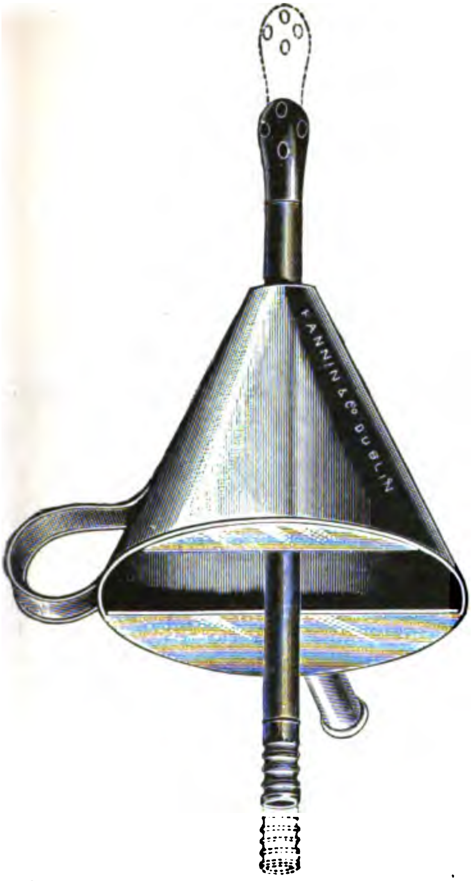

Extract from "Medical Press,"

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